UNISYS

U 5000/30, U 5000/35, U 5000/50, and U 5000/55

Hardware Installation Guide

Priced Item

April 1990

Printed in U S America
UP–14796

UNISYS

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Hardware Installation Guide

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About This Document

Purpose

This guide provides complete instructions for installing, configuring, and upgrading your system. After you complete the procedures described in this manual, your new or expanded system will be ready to load software.

Scope

This document details installation and configuration of the following hardware:

- Basic system cabinet
- External peripherals
- Streaming tapes

By following the instructions in this guide, you are able to successfully install, configure, and power up your system. The Error Message Manual identifies problems you may experience if you install or configure your system incorrectly.

Audience

Information in this guide is intended for use by anyone requiring an understanding of the installation and configuration of a U 5000 system.

Prerequisites

To install a U 5000 system, it is suggested that the reader be familiar with basic computer terminology and components and be capable of basic installation of computerized equipment such as a personal computer.

How to Use This Document

This document is designed both as a guide for new installations and as a reference after your system is installed.

The focus of this manual is on hardware supported by Unisys®. Users who want to install additional hardware should refer to the manufacturer's documentation for that equipment.

If you are installing a unit for the first time, read the introductory material in the "Introduction" section.

After your system is installed and operational, this manual serves as a reference. Consult it whenever you plan to reconfigure or move the system. You will also find it useful when you upgrade or expand your U 5000 system.

Pay particular attention to the notes, cautions, and warnings posted throughout the manual. They are provided to protect you from injury or from inadvertently damaging the system.

Organization

This manual contains the following:

Section 1. Introduction

This section provides general information about your system and safety precautions you should observe.

Section 2. Getting Started

This section provides an explanation of the control panels and a brief facilities overview.

Section 3. Installing the U 5000/30/35 System

This section gives directions for installing the basic system and peripherals on a U 5000/30/35 system.

Section 4. Installing the U 5000/50/55 System

This section gives directions for installing the basic system and peripherals on a U 5000/50/55 system.

Section 5. Power Up and Power Down

This section provides information on how to properly apply power to the system for the first time, and how to power down the system.

Section 6. Inserting a Streaming Tape

This section provides information on how to insert a streaming tape.

Glossary

This section contains terms you will find helpful during hardware installation.

Index

The index provides a reference to the material in this book.

Notation Conventions

The following conventions are used in this manual:

User Input	User input (such as commands, options, and arguments to commands), environment variables, and the names of directories and files appear in bold typeface shown at the left.
`System Output`	System output (such as prompt signs and responses to commands) appears in the typeface shown at the left.
WARNING	Calls attention to a procedure that could cause injury to you if improperly performed.
Caution	Calls attention to a specific procedure that could cause equipment damage if improperly performed.
Note:	Calls attention to and stresses the importance of the associated text.

Related Product Information

For further information about the U 5000 system, see the following:

Planning Guide - provides information on facilities requirements, supported peripherals, and sample configurations that help in the planning of a system installation.

Getting Started - describes what steps need to be taken in order to successfully integrate a system into a working environment and what documents to use during this process.

Software Installation Guide - describes how to install the operating system and software supported devices.

Operations Guide - provides information used on a daily basis from system power-on and power-off routines to general operation procedures. This manual also provides information on system backups, data storage use, and formatting.

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Section 1
Introduction

Introduction

The U 5000 system is designed to fit into any business environment with few special installation and site requirements. The instructions in this guide minimize the time spent setting up your system.

This section includes:

- System introduction
- Tools
- General safety precautions

Getting to Know Your System

The U 5000 system includes the U 5000/30/35 and the U 5000/50/55 model numbers. The hardware and software options available for both product lines are similar with only a few exceptions. Some of these exceptions are due to electronic constraints such as CPU speed or the number of peripheral controller ports.

One noticeable difference in the product line is the cabinet for the U 5000/30/35 and the cabinet for the U 5000/50/55. The cabinets are physically different and therefore have some unique characteristics that you should be familiar with.

Figure 1-1 shows the front views of the U 5000/30/35 and U 5000/50/55 system cabinets.

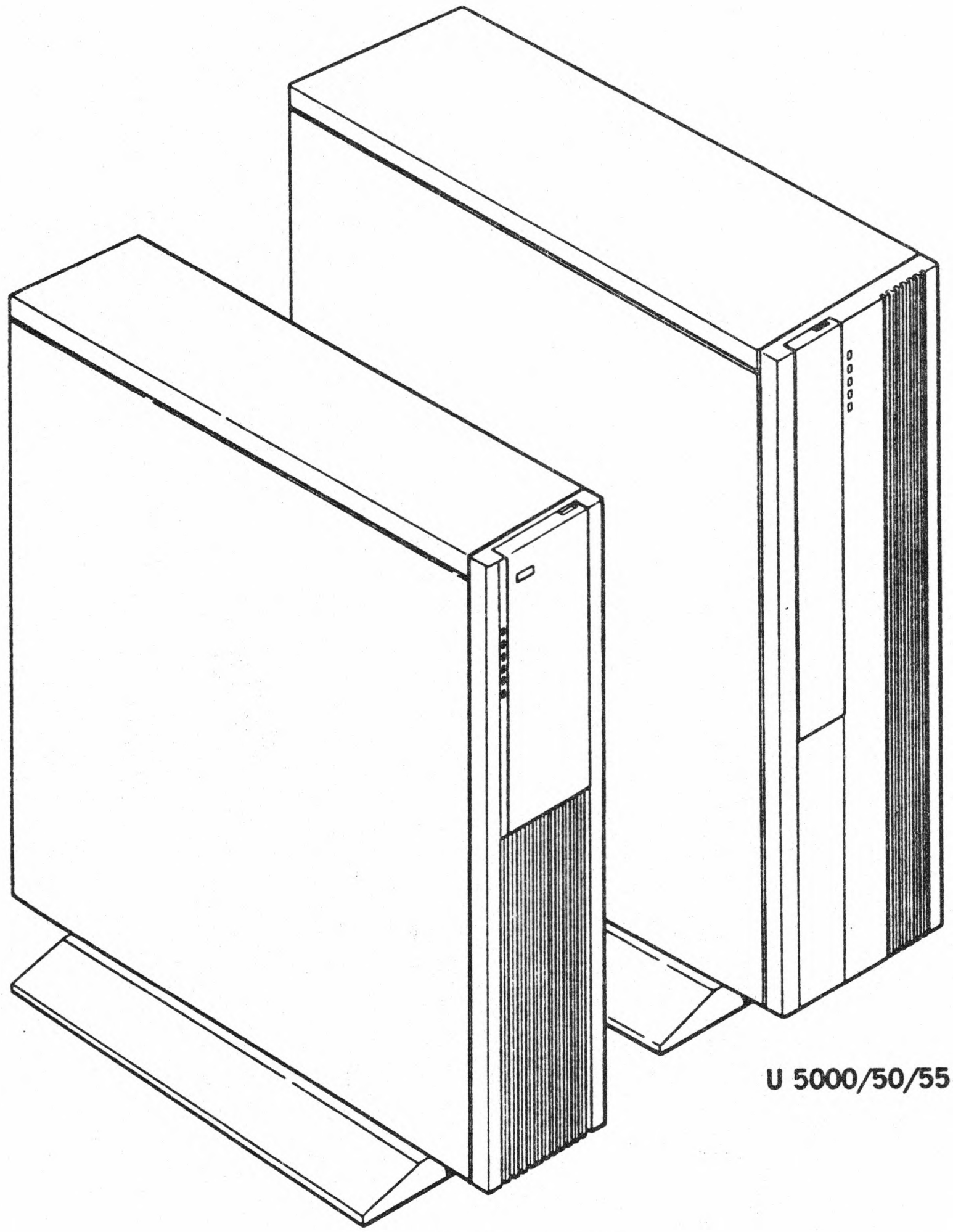

Figure 1-1. U 5000/30/35 and U 5000/50/55 Front View

Figures 1-2 to 1-4 show the rear panels of the U 5000/30 and U 5000/35 cabinets.

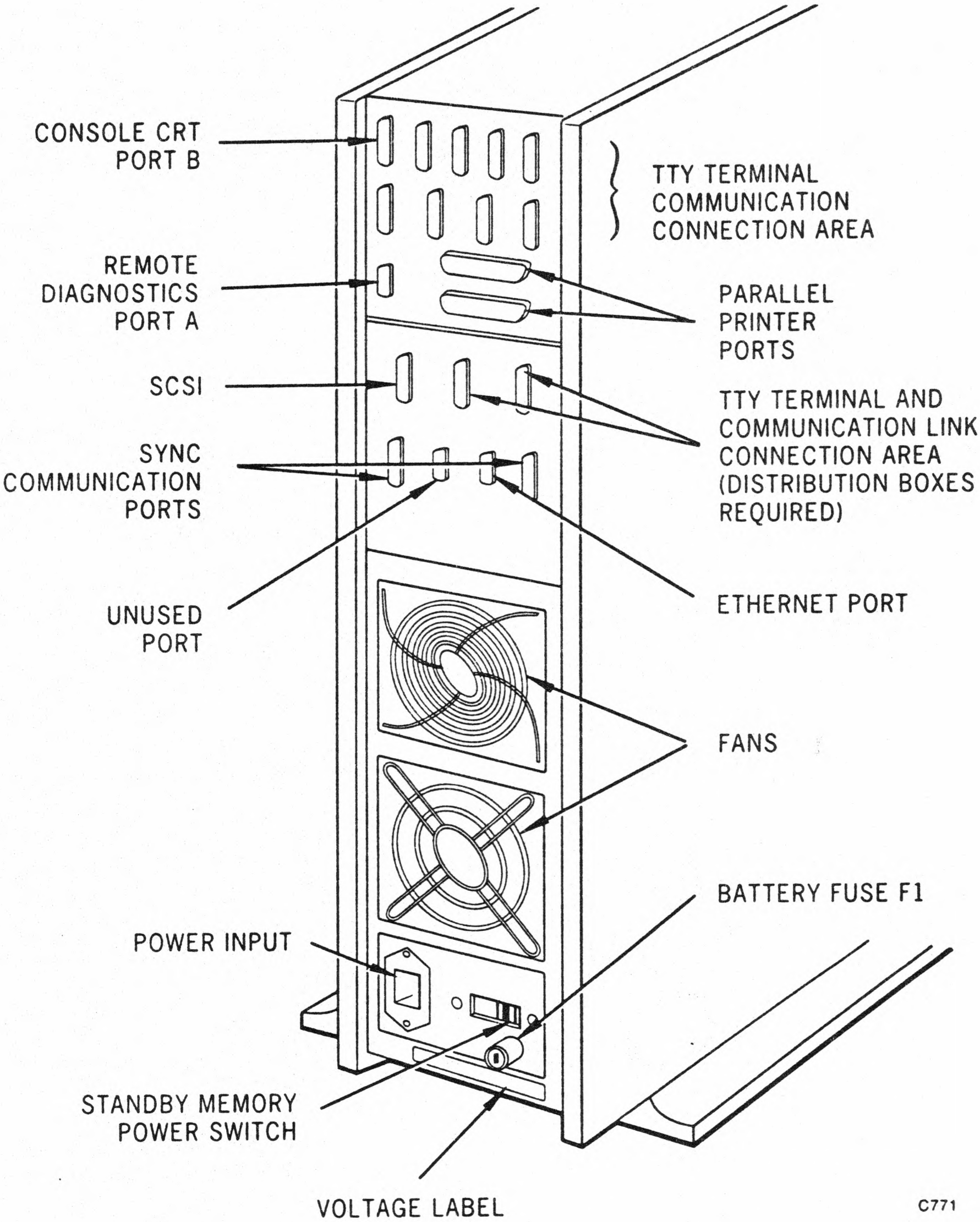

Figure 1-2. U 5000/30 Rear Panel Component Connectors

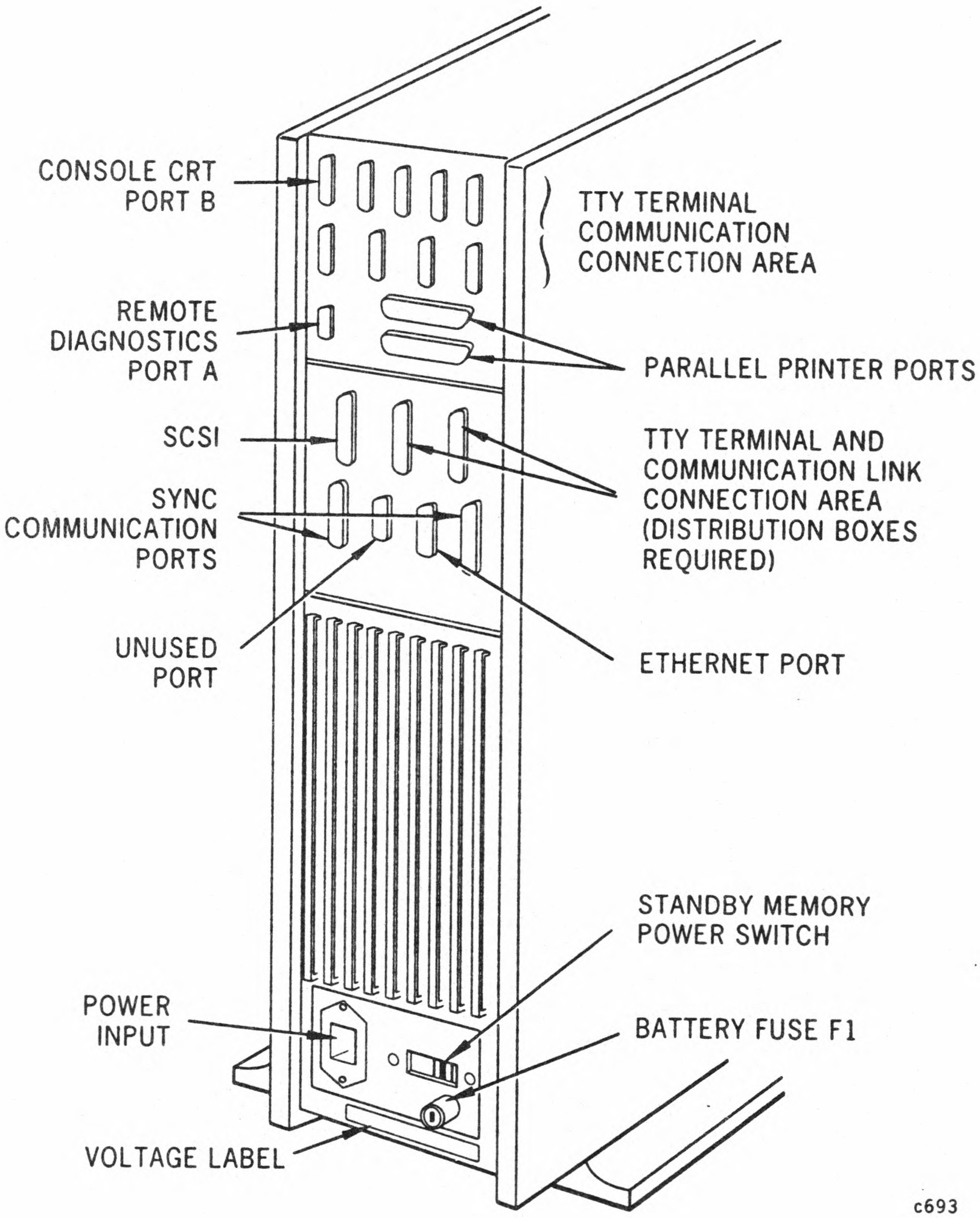

Figure 1-3. U 5000/35 (Up to and Including 16 Users) Rear Panel Component Connectors

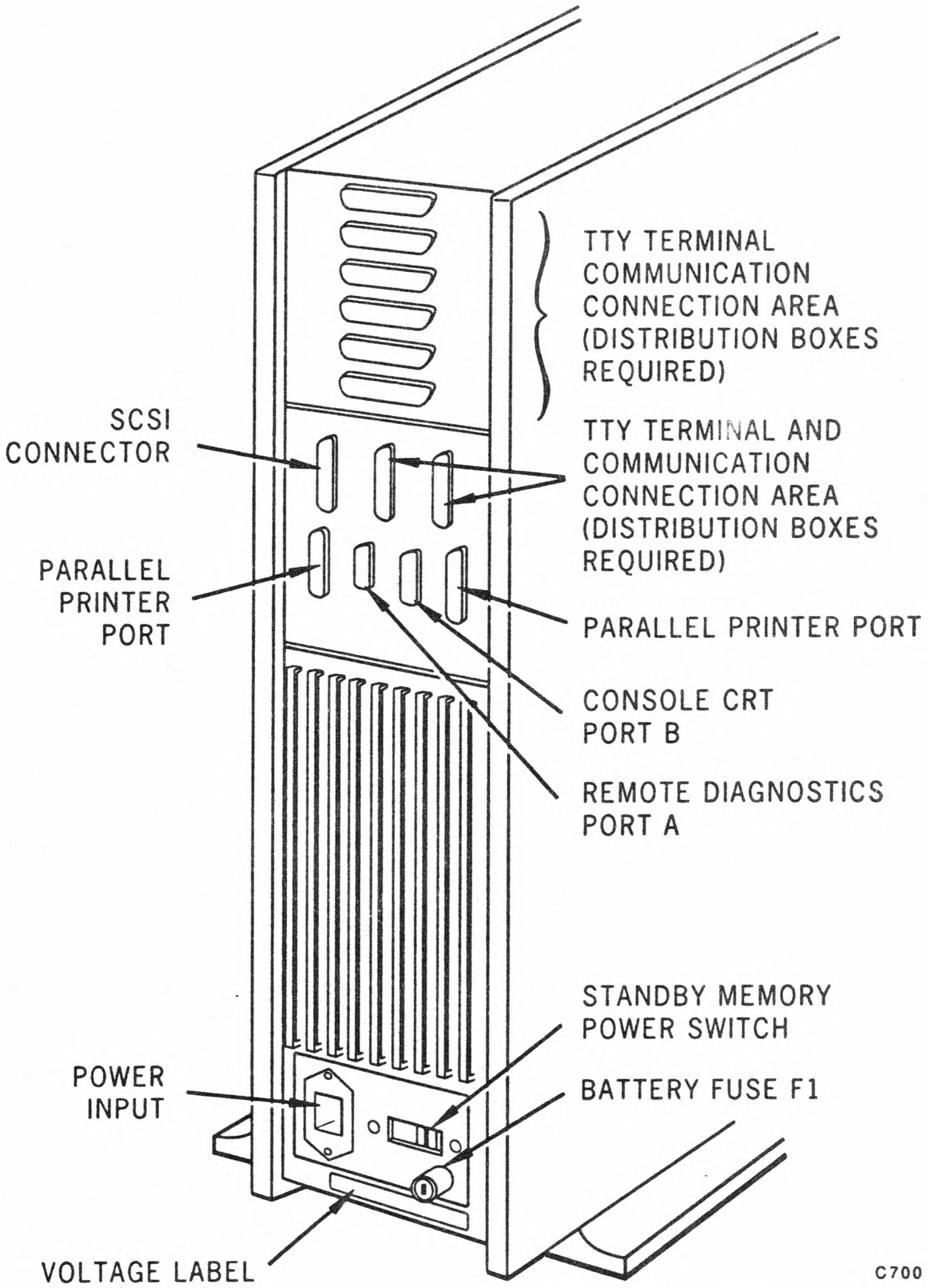

Figure 1-4. U 5000/35 (More Than 16 Users) Rear Panel Component Connectors

Figures 1-5 and 1-6 show the rear panels of the U 5000/50 and U 5000/55 cabinets.

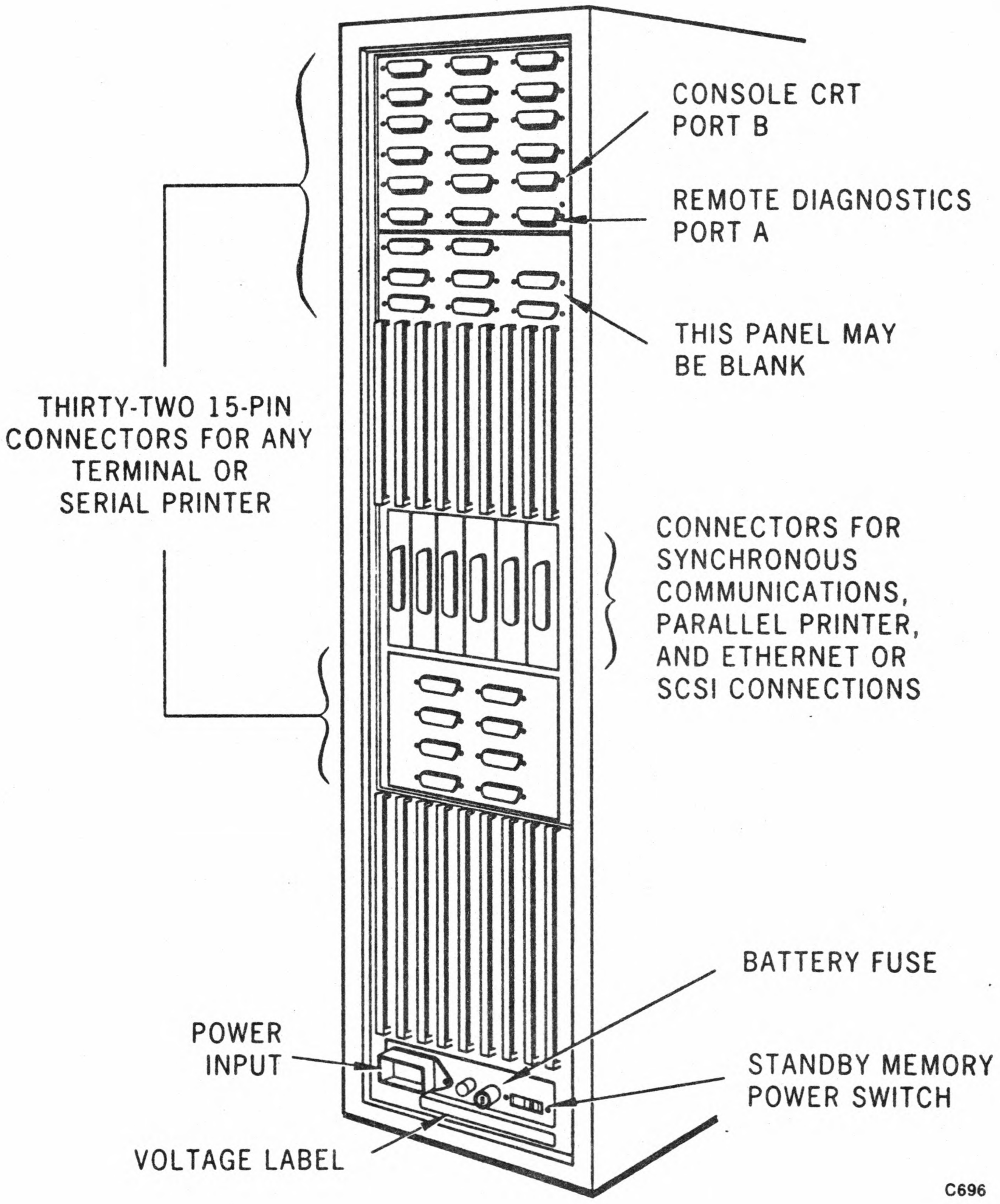

Figure 1-5. U 5000/50 Rear Panel Component Connectors

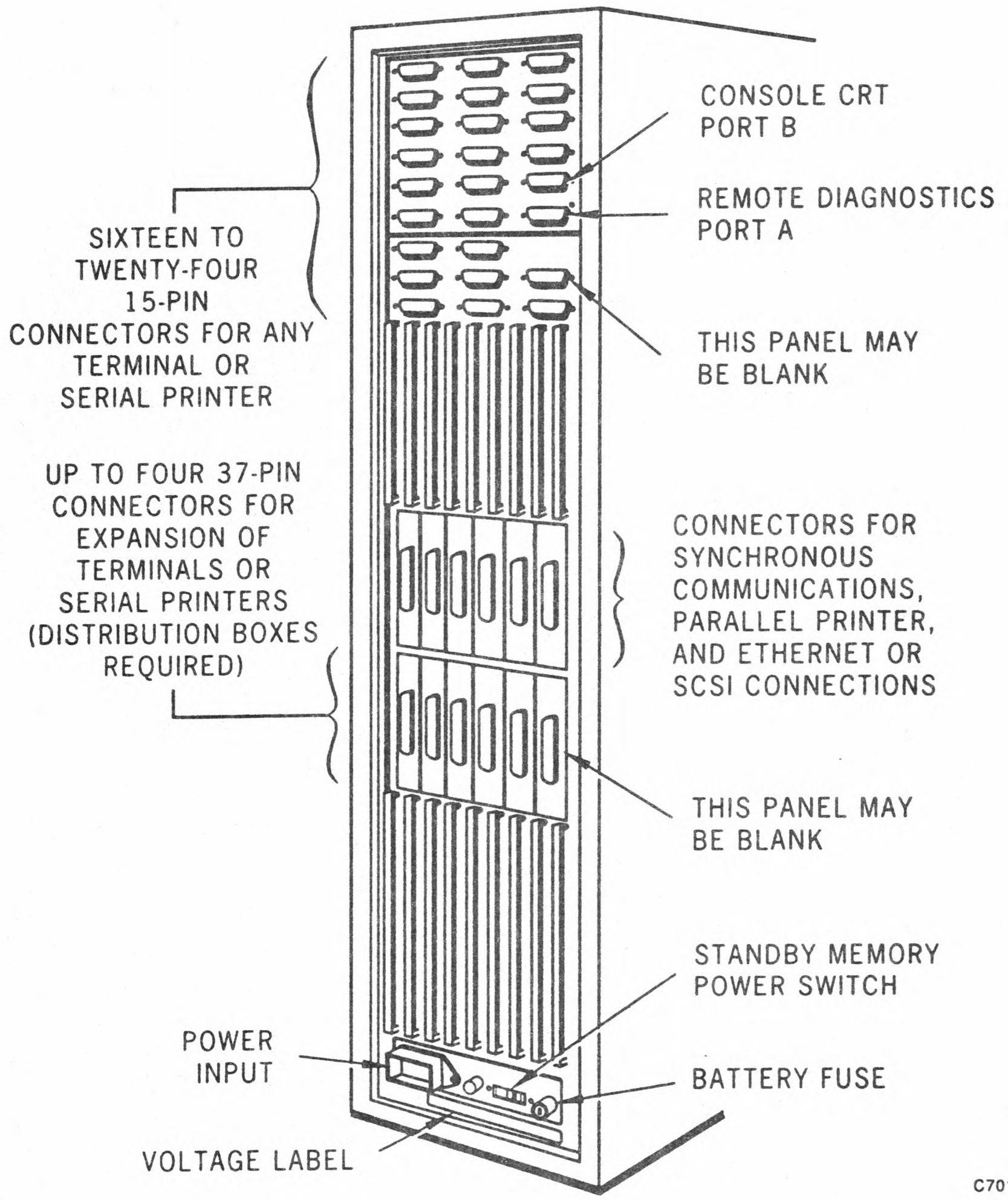
SIXTEEN TO TWENTY-FOUR 15-PIN CONNECTORS FOR ANY TERMINAL OR SERIAL PRINTER
UP TO FOUR 37-PIN CONNECTORS FOR EXPANSION OF TERMINALS OR SERIAL PRINTERS (DISTRIBUTION BOXES REQUIRED)
CONSOLE CRT PORT B
REMOTE DIAGNOSTICS PORT A
THIS PANEL MAY BE BLANK
CONNECTORS FOR SYNCHRONOUS COMMUNICATIONS, PARALLEL PRINTER, AND ETHERNET OR SCSI CONNECTIONS
THIS PANEL MAY BE BLANK
STANDBY MEMORY POWER SWITCH
POWER INPUT
BATTERY FUSE
VOLTAGE LABEL
C701

Figure 1-6. U 5000/55 Rear Panel Component Connectors

Tools

The following tools are needed for installing the system:

- Combination pliers
- Needlenose pliers
- Small, medium, and large screwdrivers, both standard and Phillips

Safety Precautions

Several safety and handling precautions are listed in the following paragraphs and need to be observed in order to make the installation of the system safe and efficient.

> **WARNING**
>
> Personal injury may occur from electrical shock if the following safety precautions are not observed.

Make sure the power to the system is OFF when accessing any internal component of the system. An internal component is a device that is located under or behind a panel, cover, or shield.

If the system is powered ON follow the power-down sequence located in the Operations Guide or the Software Installation Guide. Also remove the AC plug from the wall receptacle and the unit when accessing an internal component.

Caution

Damage to the system may occur if the following safety precautions are not observed.

Do not power on the system until the installation is complete. Refer to the "Power Up and Power Down" section to correctly apply power to the system.

If the system must be repositioned, be sure not to stretch or pinch any cables that may be attached to the system.

This Unisys product contains a battery which automatically provides emergency current for retention of memory data in the event of a short AC power interruption. To prolong battery life and assure its satisfactory operation when needed, please observe these precautions:

- Do not unplug or disconnect external power to this unit after it is installed. Battery life is significantly reduced if external AC power is regularly disconnected during working hours or overnight.

- If you want to disconnect this unit for an extended period of time, disconnect the battery to prevent total battery discharge. To accomplish this, shut down the operating system (described in the "Operator Duties" section in your Operations Guide), move the STANDBY MEMORY POWER switch to the OFF position, move the POWER switch to the OFF position, and remove the battery back-up fuse from the unit.

- Have a new battery installed periodically in accordance with the replacement schedule shown on the label attached to the U 5000 system near the battery.

- Only Unisys-trained personnel should attempt battery replacement. Electrical shock, damage, or loss of memory data may result if improper procedures are used.

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Section 2
Getting Started

Overview

This section describes the site preparation for the system and the control panels. Before you install your system software, familiarize yourself with these front panel controls and procedures.

Before You Begin

You should already have the necessary cables and the separate installation instructions for each terminal and printer. Know where you will place each device, and how your system will be configured. Before beginning the procedures described in this guide, unpack and install each of your printers and terminals according to the installation instructions provided with each device.

As part of the system installation, connect one of your terminals to a console port and use it for start-up procedures. Determine which terminal you will use for this purpose.

If your site has not been prepared for installation, refer to the Planning Guide before beginning.

System Control Panels

Although your primary interface with the system is through a terminal screen and keyboard, the system control panels provide the power ON/OFF switch and several status indicators. The operator interface for the main

unit consists of a single ON/OFF switch and five status indicators, located on the control panel. The ON/OFF switch is used to remove operating voltage from the units when they are not in use. The status indicators provide hardware integrity information and hardware activity information.

Refer to Figures 2-1 and 2-2 for the locations of the status indicators for the appropriate system.

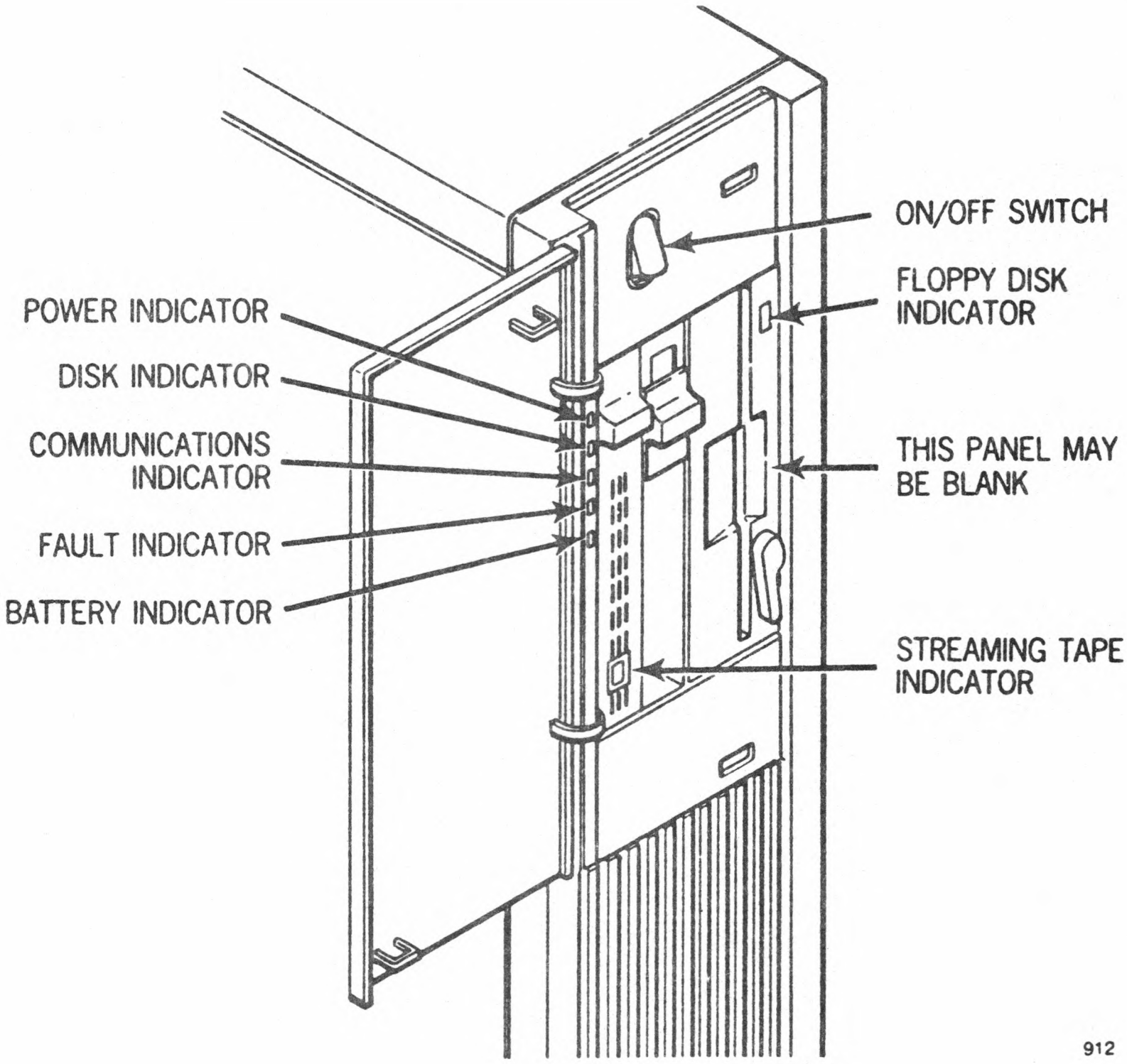

Figure 2-1. U 5000/30/35 Status Indicators

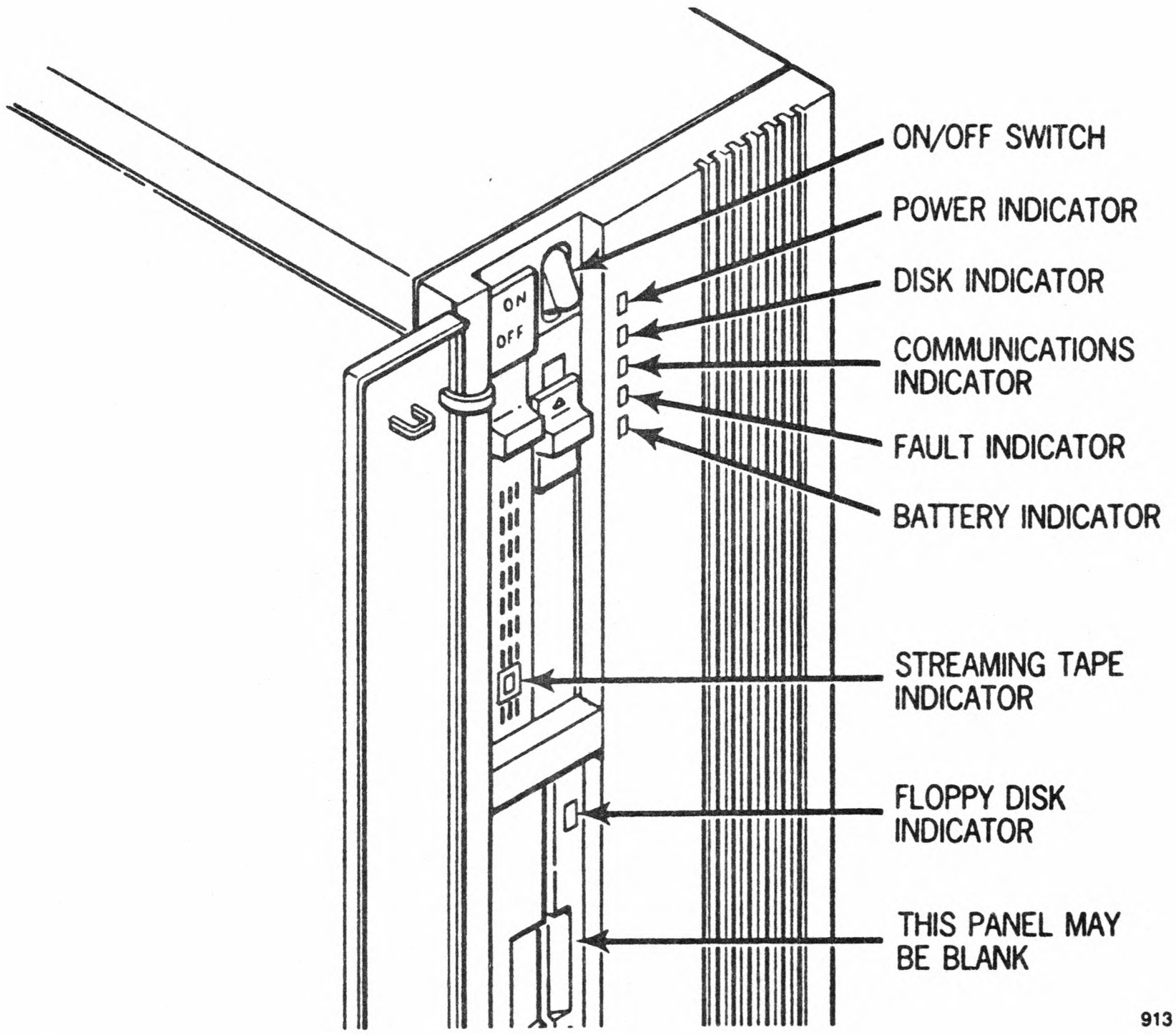

Figure 2-2. U 5000/50/55 Status Indicators

The functions of the main unit control panel elements are discussed in the following subsections.

ON/OFF Switch

- ON - turns on the main unit. Moving the switch from OFF to ON causes the main unit logic element to perform a predefined start-up sequence consisting of basic integrity testing, loading system software into memory if installed and not previously loaded, and enabling system software.

- OFF - turns off the main unit. Before powering off the system, shut down the operating system (described in the "Operator Duties" section of your Operations Guide). With the switch in the OFF position, the memory support system remains enabled, which preserves the contents of system memory. The time-of-day clock records the shut-down time.

Power Indicator

The power indicator for the U 5000 system displays a red or green light according to the following descriptions:

- Green - indicates that the power system logic operating voltages, including the memory support system voltages, are enabled and operating within their specified ranges. This is the normal operating mode.

- Red - indicates that the power system logic operating voltage, including the memory support system voltage, is not within its specified operating range. The system is not operational if this condition exists.

- Off - indicates that except for the memory support system, the unit power system is off.

Disk Indicator

- On - a green light indicates that a main unit hard disk is selected and operating. Depending on the duration of disk activity, the light may only flicker.

- Off - indicates the absence of system unit hard disk activity.

Communications Indicator

- On - a green light indicates that one or more of the unit's remote communication channels is requesting a line connection.

- Off - indicates that no remote communication channel in the unit is requesting a line connection.

Fault Indicator

- On - a red light indicates that a critical system failure exists. If a critical system failure exists, the system is not operational.

- Blinking - indicates that a file system is 90 percent full.

- Off - indicates that the system is operational.

Battery Indicator

- On - a red light indicates that a fault exists in the memory support system. When this condition occurs, the system also turns on the fault indicator to identify a critical system failure. The system is not operational.

- Flashing red light - indicates that the battery is being charged. The battery may or may not preserve the contents of memory if AC power is lost.

- Off - indicates that the battery is fully charged and will preserve the contents of memory during an AC power failure.

Floppy Disk Indicator

If your system has one or more floppy disk drives, each drive has an indicator.

- On - a light indicates that the floppy disk drive is selected and ready for disk activity, or that the drive is selected and a disk operation is in progress.

- Off - indicates the absence of floppy disk activity.

Streaming Tape Indicator

If your system has one or more streaming tape drives, each drive has an indicator.

- On - a light indicates that the streaming tape drive is selected and ready for tape activity, or that the drive is selected and a tape operation is in progress.

- Off - no light indicates the absence of streaming tape activity.

Section 3
Installing the U 5000/30/35 System

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Section 3
Installing the U 5000/30/35 System

Introduction

Before installing the U 5000/30/35 system, you should know which of your printers are connected as serial printers and which are connected as parallel printers.

Your system requires a control console terminal. The control console is used to install and maintain the system. Any of the terminals that you ordered with your system can be connected as a control console. Before beginning these procedures, know which terminal is designated for this purpose.

If your site has not been prepared for the U 5000/30/35 system, refer to the Planning Guide.

Figures 3-1 to 3-3 show the connectors that are used for the components of the U 5000/30/35 systems.

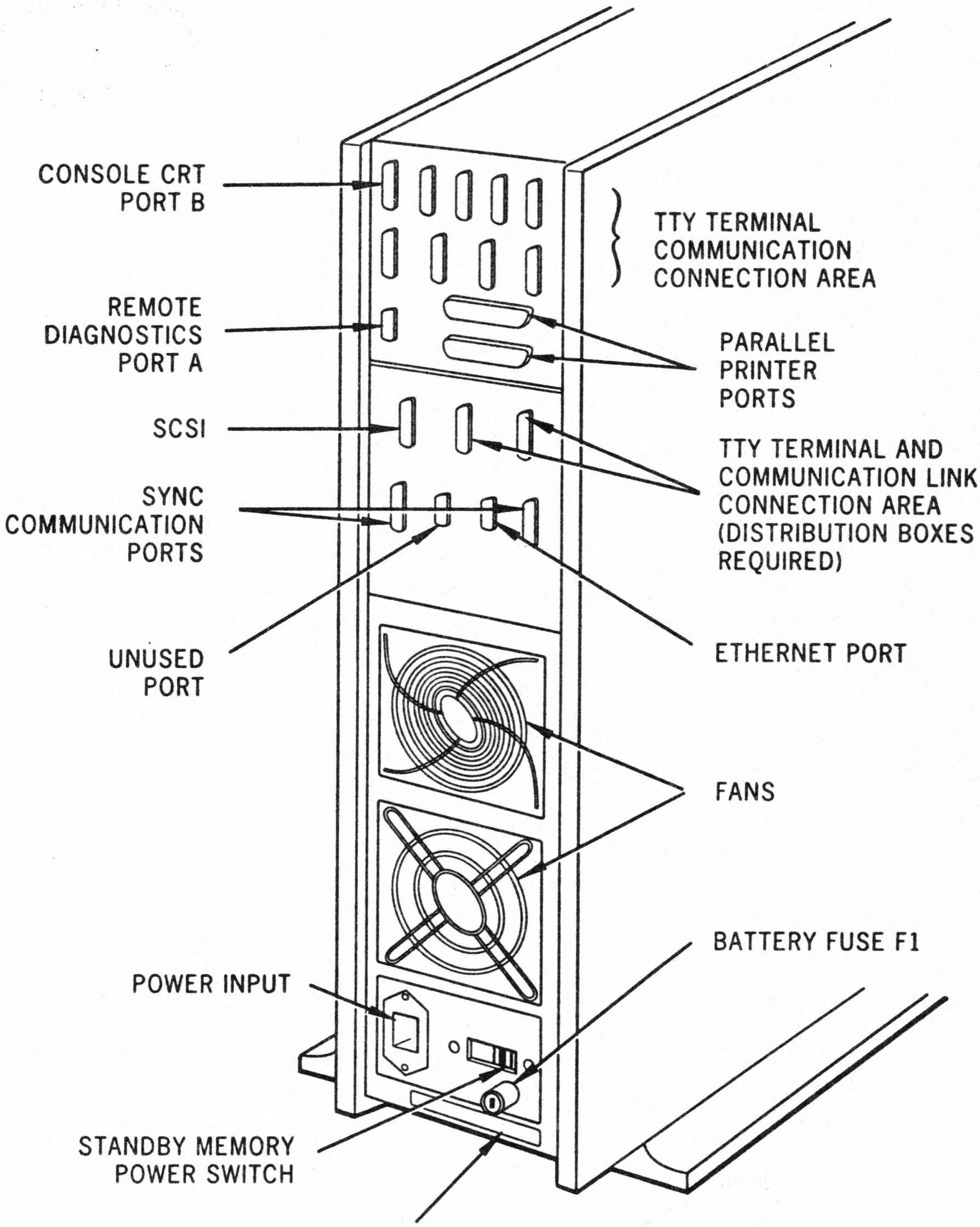

Figure 3-1. Rear View of the U 5000/30 Component Connectors

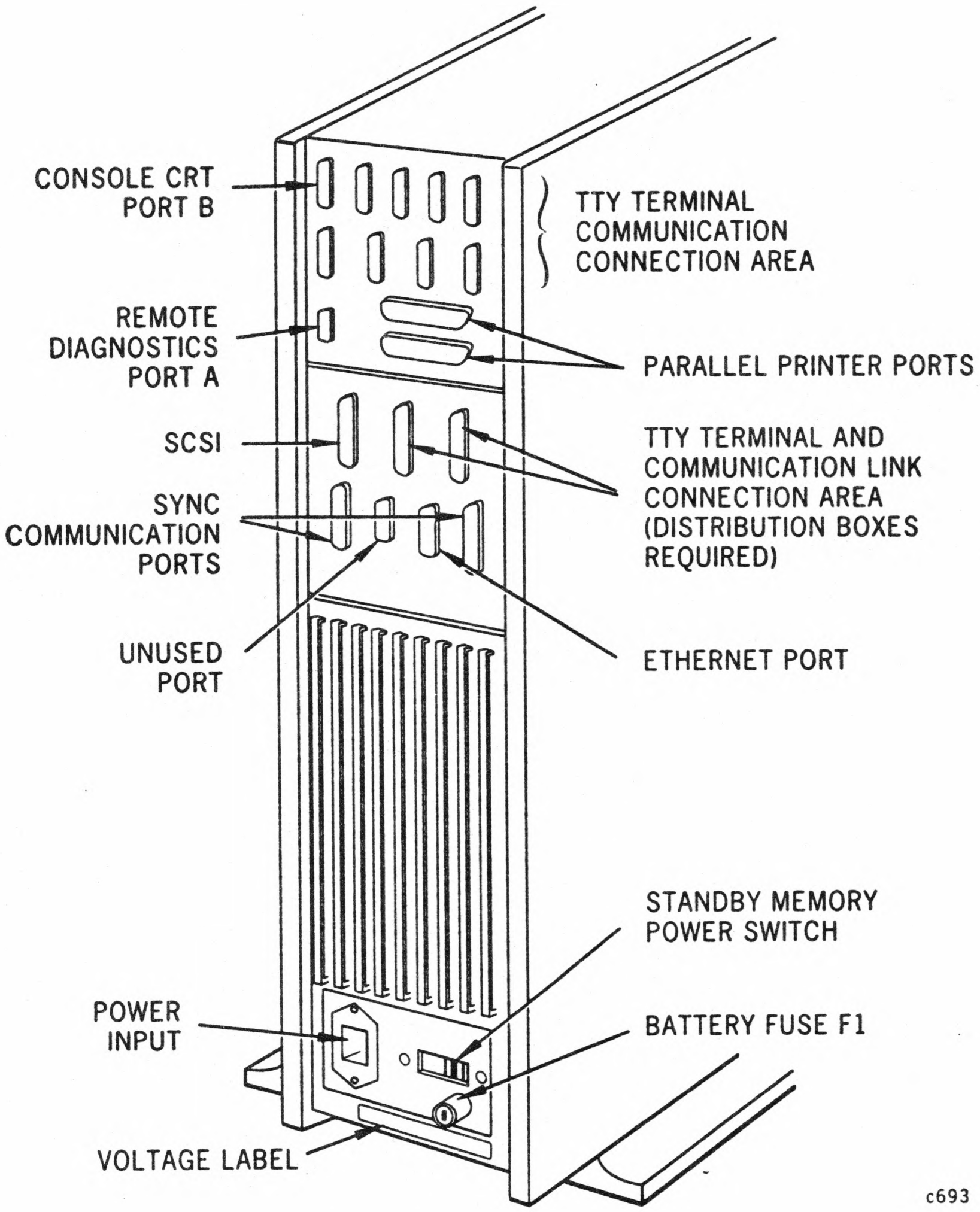

Figure 3-2. Rear View of the U 5000/35 Component Connectors (Up to and Including 16 Users)

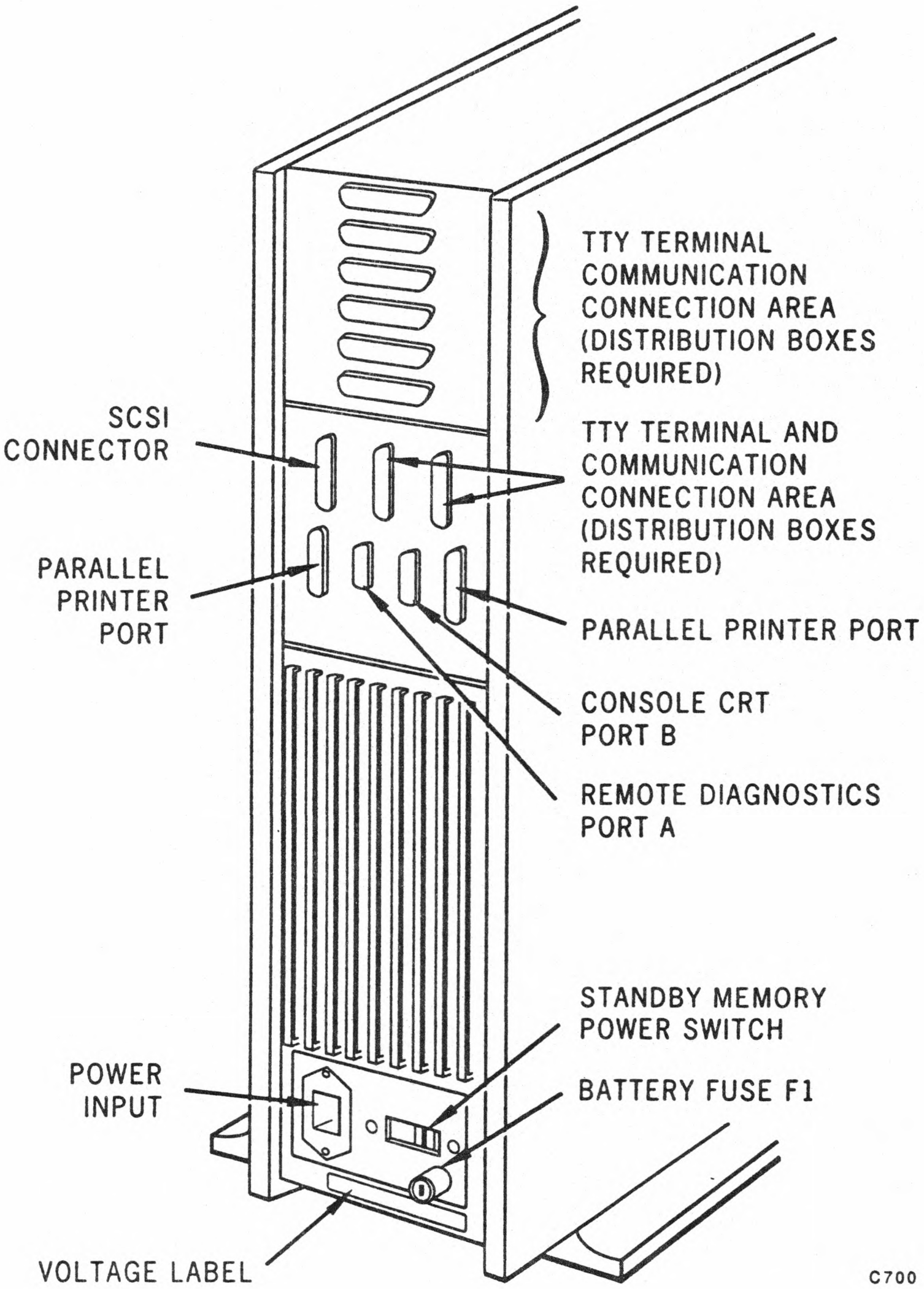

Figure 3-3. Rear View of the U 5000/35 Component Connectors (More Than 16 Users)

Installation Procedures

The U 5000/30 has a minimum of six and a maximum of 16 asynchronous ports for connecting any combination of tty terminals or serial printers. The first eight ports have female 15-pin connectors that use the RS-232-C cable. The eight additional ports are obtained by adding an asynchronous controller card and by using distribution boxes.

The U 5000/35 can have a minimum of six and a maximum of 32 asynchronous ports for connecting any combination of tty terminals or serial printers. These ports use the RS-232-C cable. The additional ports are available by adding asynchronous controller cards and may require changing bulkheads. The use of more than eight ports requires distribution boxes.

Processor Channel A is a remote diagnostics port for a modem.

Processor Channel B is initialized by the firmware as the system control console port.

One or two female 25-pin connectors are available for parallel printers (Centronics™ interface).

Two synchronous ports with female 25-pin connectors are available for high speed communication if a synchronous/asynchronous board is installed in the system. A position on the bulkhead is available for the addition of Ethernet.

Caution

Attach cables carefully. Damage to connector pins causes the system to malfunction.

Follow these steps to install your system:

1. Unpack and install the terminal designated as the console. Installation instructions are included with the terminal.

   Configure the console terminal with the following characteristics (refer to the documentation accompanying your particular terminal):

   Xon/Xoff
   New Line Off
   7 bits/character
   Parity on, even
   Reverse Video Attribute
   9600 Baud
   1 stop bit

   If possible, configure all terminals with the following characteristics:

   Mode: VT100™ (ANSI)
   Scroll: Jump
   Auto Repeat: On
   Background: Dark
   Cursor: Underline
   Wrap Around: On
   Margin Bell: On

2. Unpack the main unit of the U 5000/30/35 system.

3. Connect the control console to Channel B of the main unit as illustrated in Figures 3-4 to 3-6.

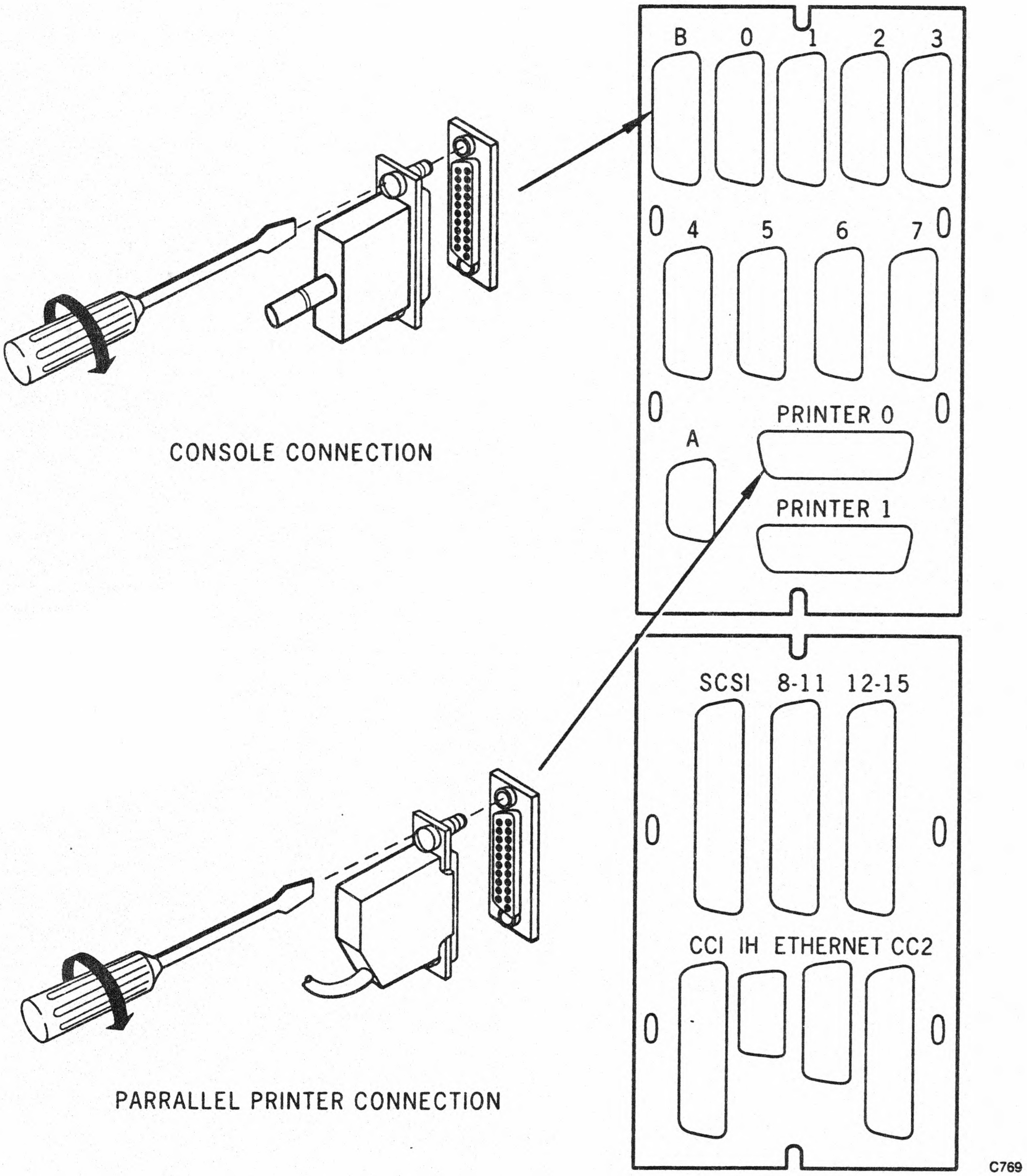

Figure 3-4. Back of the U 5000/30 Unit

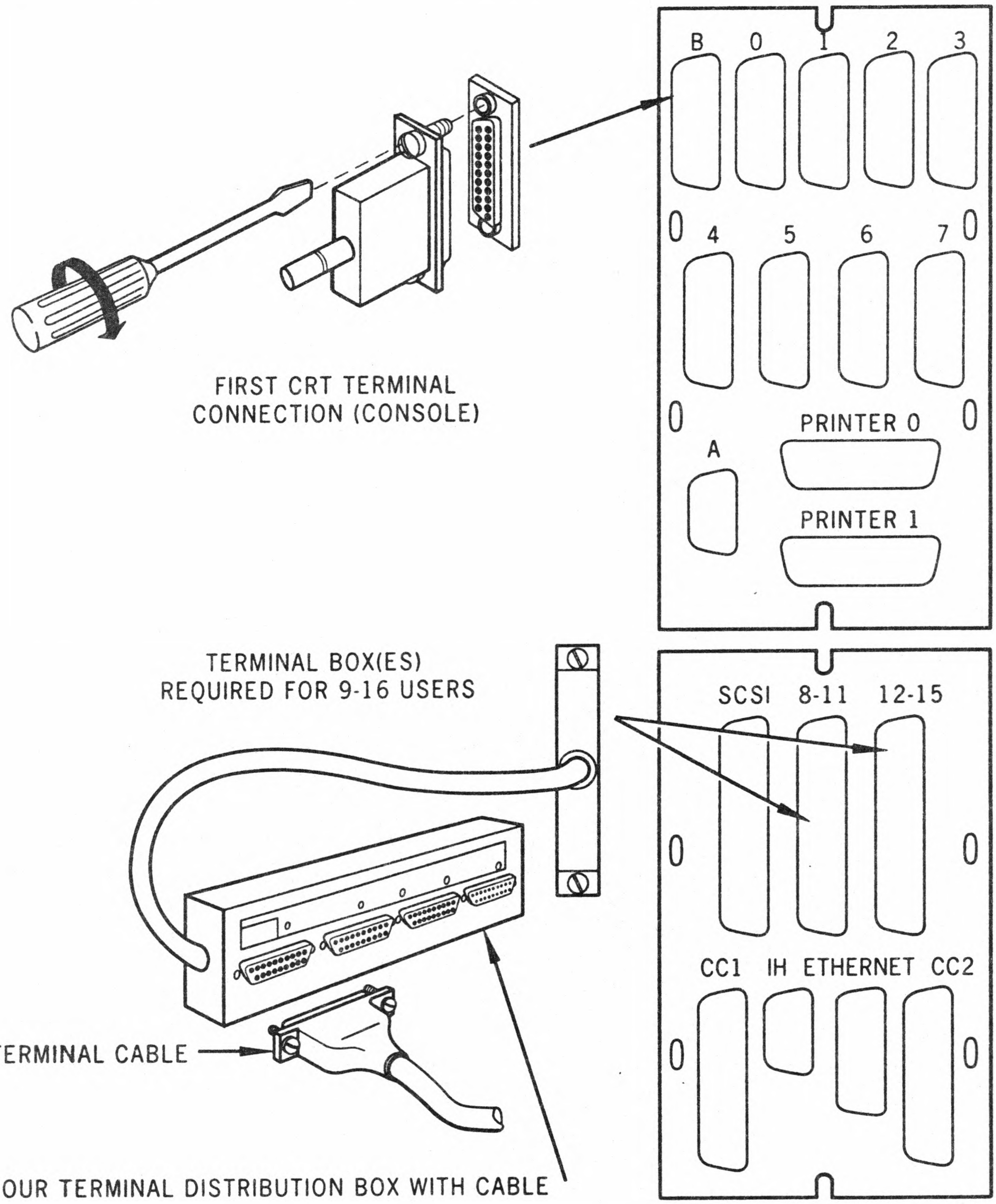

Figure 3-5. Back of the U 5000/35 Unit (Up to and Including 16 Users)

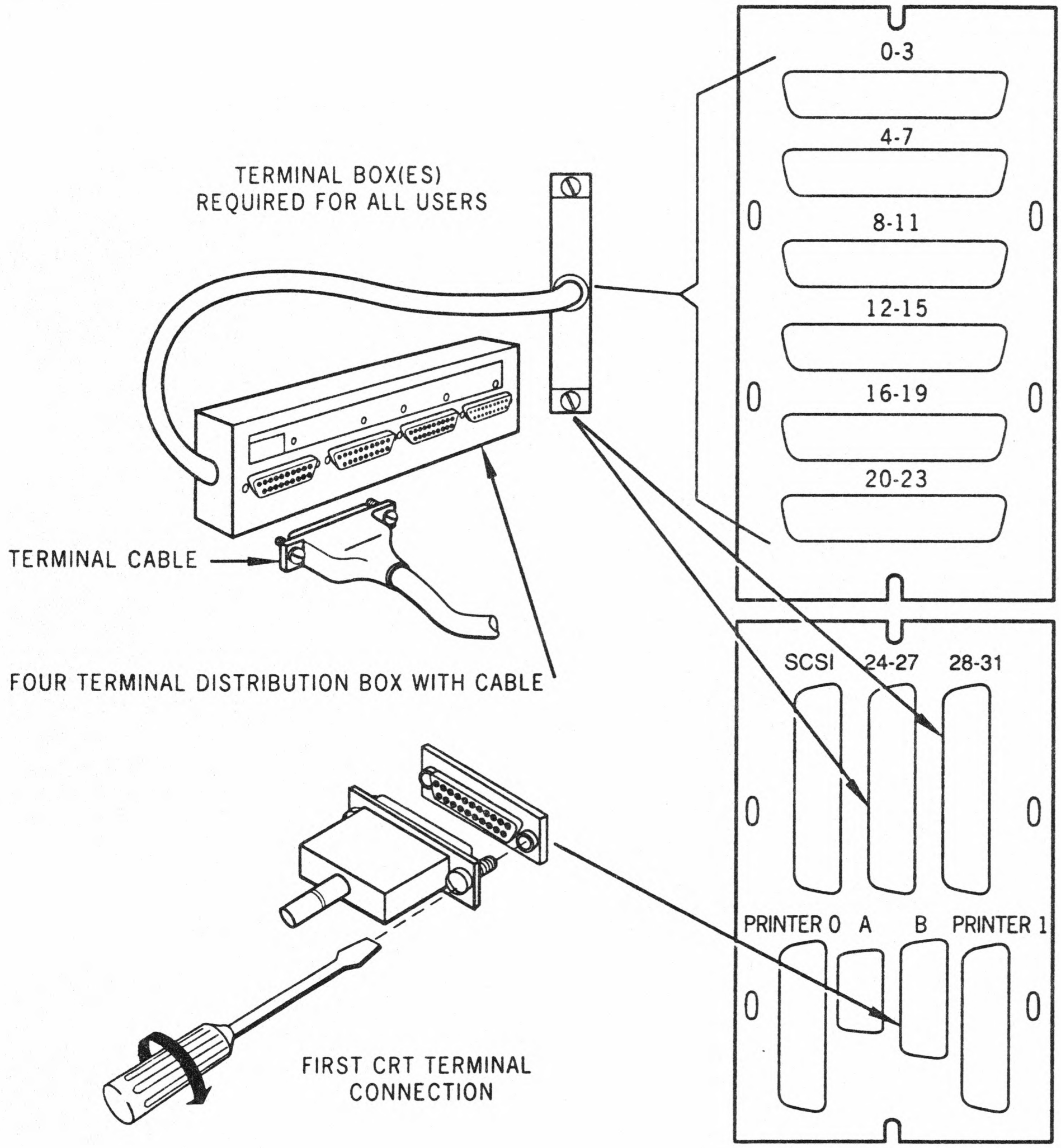

Figure 3-6. Back of the U 5000/35 Unit (More Than 16 Users)

4. Unpack and install the printers and terminals according to the instructions provided with each unit.

5. Attach the terminals and printers to the connectors as indicated in Figures 3-4 to 3-6. Make the connections in an order that is suited to the configuration of your system.

6. Attach the parallel printer to the appropriate connector as indicated in Figures 3-4 to 3-6.

7. Locate the battery back-up fuse in the package containing the power cord. Install the fuse and turn on the standby memory power switch. (Refer to Figure 3-7.)

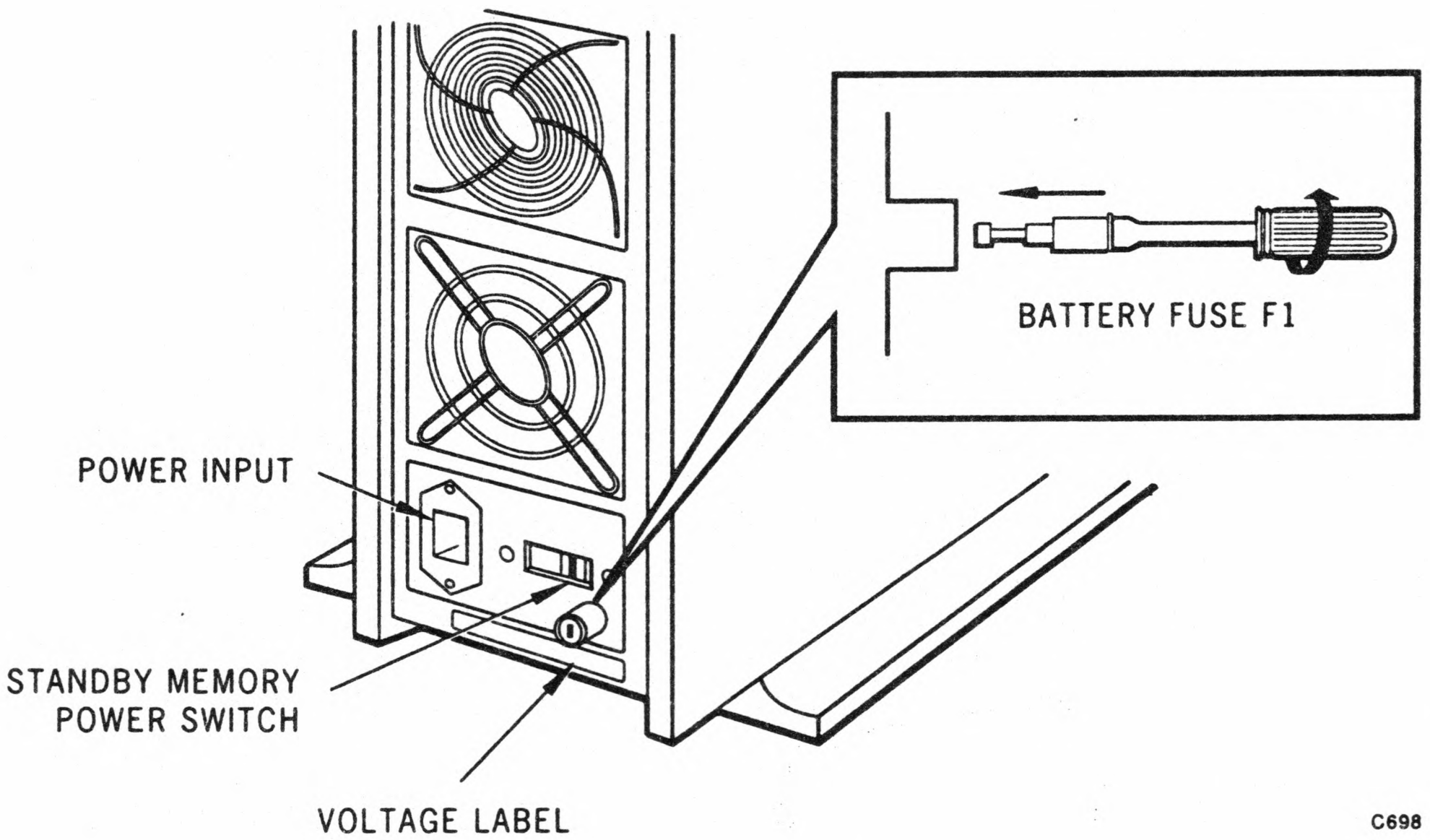

Figure 3-7. Rear View of the U 5000/30/35 Battery Back-Up Fuse

8. Attach the AC power cord to the unit, plug it into a power outlet, and proceed to the "Power Up and Power Down" section. Install the software following the procedures in the Software Installation Guide.

Section 4
Installing the U 5000/50/55 System

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Section 4
Installing the U 5000/50/55 System

Introduction

Before installing the U 5000/50/55 system, you should know which of your printers are connected as serial printers and which are connected as parallel printers.

Your system requires a control console terminal. The control console is used to install and maintain the system. Any of the terminals that you ordered with your system can be connected as a control console. Before beginning these procedures, know which terminal is designated for this purpose.

If your site has not been prepared for the U 5000/50/55 system, refer to the Planning Guide.

Figures 4-1 and 4-2 show the connectors that are used for the components of the U 5000/50/55 systems.

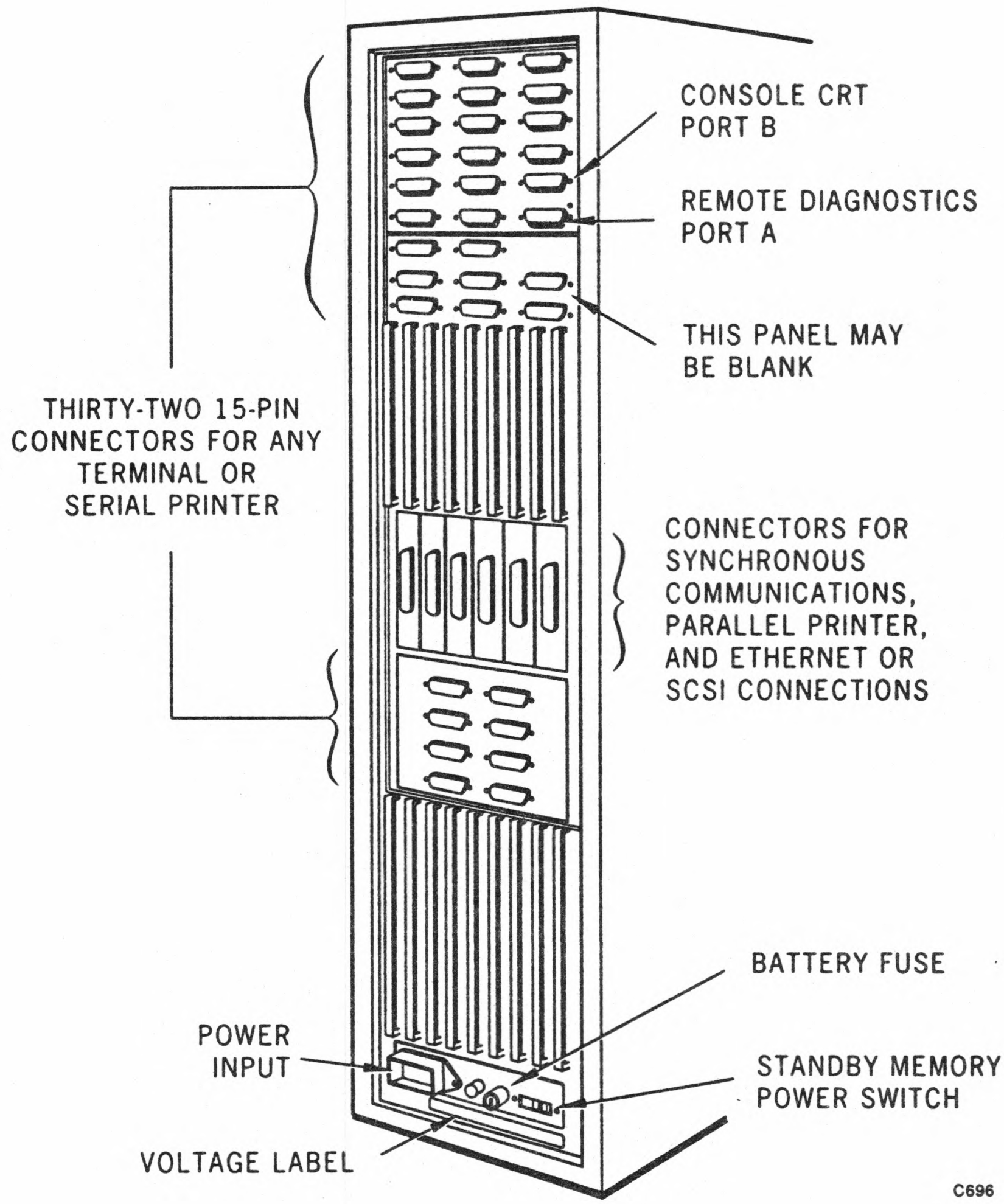

Figure 4-1. Rear View of the U 5000/50 Component Connectors

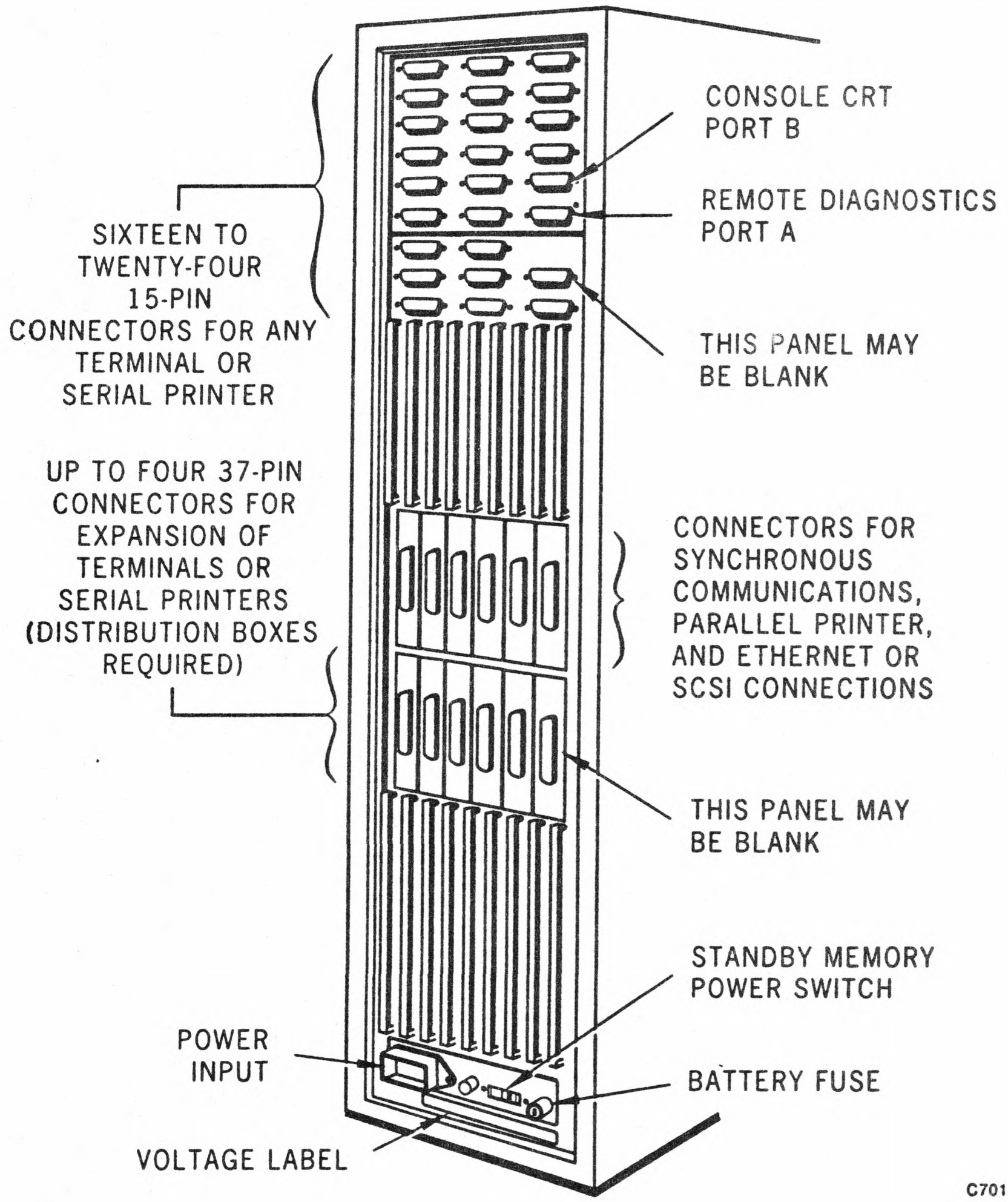
SIXTEEN TO TWENTY-FOUR 15-PIN CONNECTORS FOR ANY TERMINAL OR SERIAL PRINTER
UP TO FOUR 37-PIN CONNECTORS FOR EXPANSION OF TERMINALS OR SERIAL PRINTERS (DISTRIBUTION BOXES REQUIRED)
CONSOLE CRT PORT B
REMOTE DIAGNOSTICS PORT A
THIS PANEL MAY BE BLANK
CONNECTORS FOR SYNCHRONOUS COMMUNICATIONS, PARALLEL PRINTER, AND ETHERNET OR SCSI CONNECTIONS
THIS PANEL MAY BE BLANK
STANDBY MEMORY POWER SWITCH
POWER INPUT
BATTERY FUSE
VOLTAGE LABEL
C701

Figure 4-2. Rear View of the U 5000/55 Component Connectors

Installation Procedures

The U 5000/50 system can have a minimum of six and a maximum of 32 asynchronous ports available for any combination of terminals and serial printers. These ports have female 15-pin connectors that use the RS-232-C cable.

Processor Channel A is a remote diagnostics port for a modem.

Processor Channel B is initialized by the firmware as the system control console port.

On a fully configured U 5000/50 system there are six mini-bulkhead positions available for:

- 1 to 2 parallel printers
- 1 Ethernet connection
- 1 UNISCOPE® connector
- 1 SCSI connection
- 1 to 2 synchronous connections
- MUX-5000 connection (coaxial)

The U 5000/55 system has a minimum of 16 and a maximum of 40 asynchronous ports available for any combination of terminals and serial printers on the rear bulkhead. These ports have female 15-pin connectors that use the RS-232-C cable. Up to 64 total users can be configured using MUX-5000. The MUX-5000 ports use a female 25-pin connector for the RS-232-C cable.

Processor Channel A is a remote diagnostics port for a modem.

Processor Channel B is initialized by the firmware as the system control console port.

On a fully configured U 5000/55 system there are 12 mini-bulkhead positions available for:

- 2 parallel printers
- 1 Ethernet connection
- 1 UNISCOPE connector
- 1 SCSI connection
- 1 Token-Ring adapter
- 2 synchronous connectors
- 2 MUX-5000 connections (coaxial)
- 4 DB-37 asynchronous RS-232-C connectors (these require terminal distribution boxes)

Follow these steps to install your system:

1. Unpack and install the terminal that is designated as the console. Installation instructions are included with the terminal.

   Configure the console terminal with the following characteristics (refer to the documentation accompanying your particular terminal):

   Xon/Xoff
   New Line Off
   7 bits/character
   Parity on, even
   Reverse Video Attribute
   9600 Baud
   1 stop bit

If possible, configure all terminals with the following characteristics:

Mode: VT100 (ANSI)
Scroll: Jump
Auto Repeat: On
Background: Dark
Cursor: Underline
Wrap Around: On
Margin Bell: On

2. Unpack the main unit of the U 5000/50/55 system.

3. Connect the control console to Channel B of the main unit as illustrated in Figures 4-3 and 4-4.

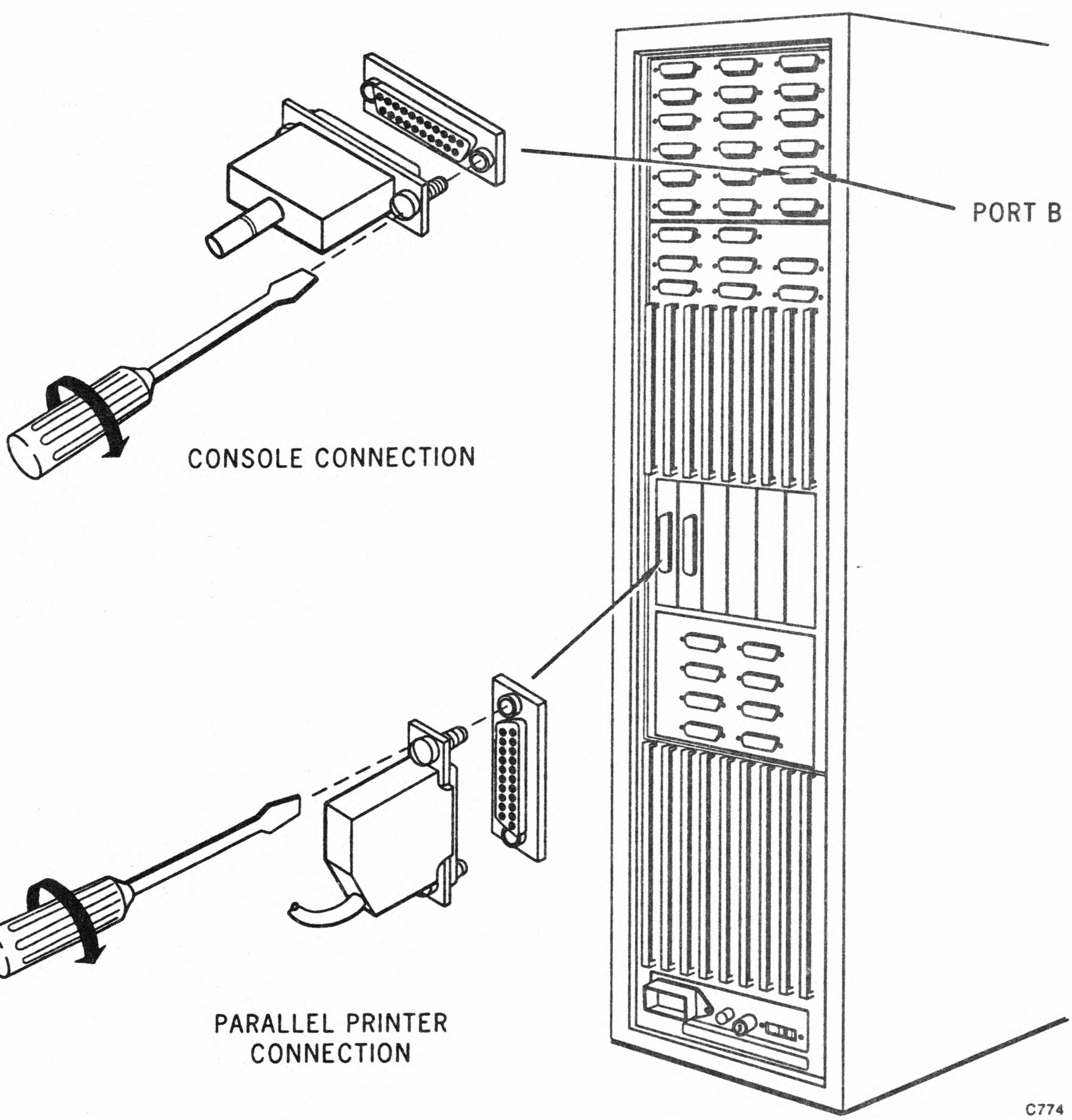

Figure 4-3. Back of the U 5000/50 Unit

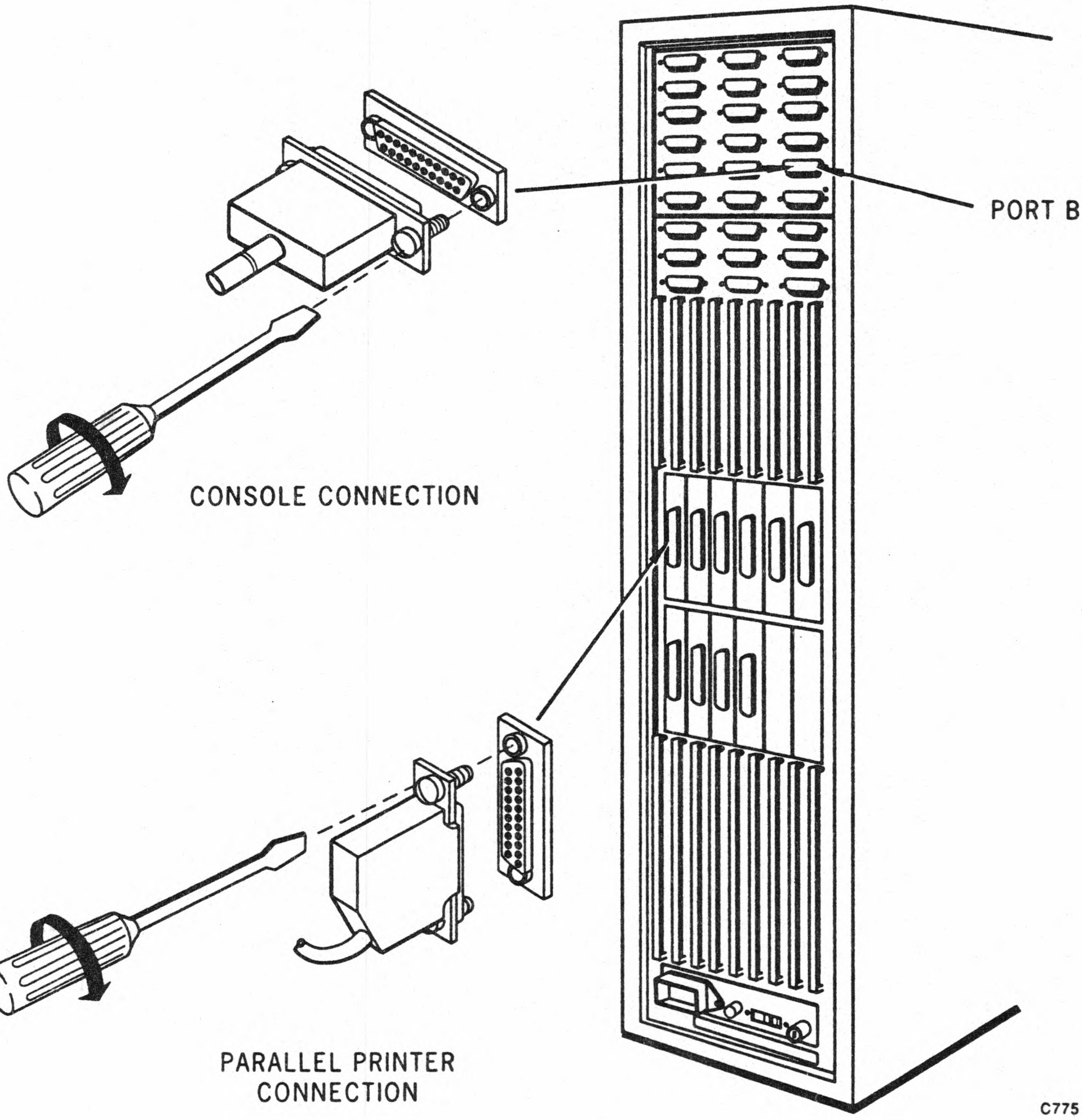

Figure 4-4. Back of the U 5000/55 Unit

4. Unpack and install the printers and terminals according to the instructions provided with each unit.

> **Caution**
>
> Attach cables carefully. Damage to connector pins causes the system to malfunction.

5. Attach the terminals and printers to the connectors as indicated in Figures 4-3 and 4-4. Make the connections in an order that is suited to the configuration of your system.

6. Attach the parallel printer to the appropriate connector as indicated in Figures 4-3 and 4-4.

7. Locate the battery back-up fuse in the package containing the power cord. Install the fuse and turn on the standby memory power switch. Refer to Figures 4-5 and 4-6 for the appropriate system.

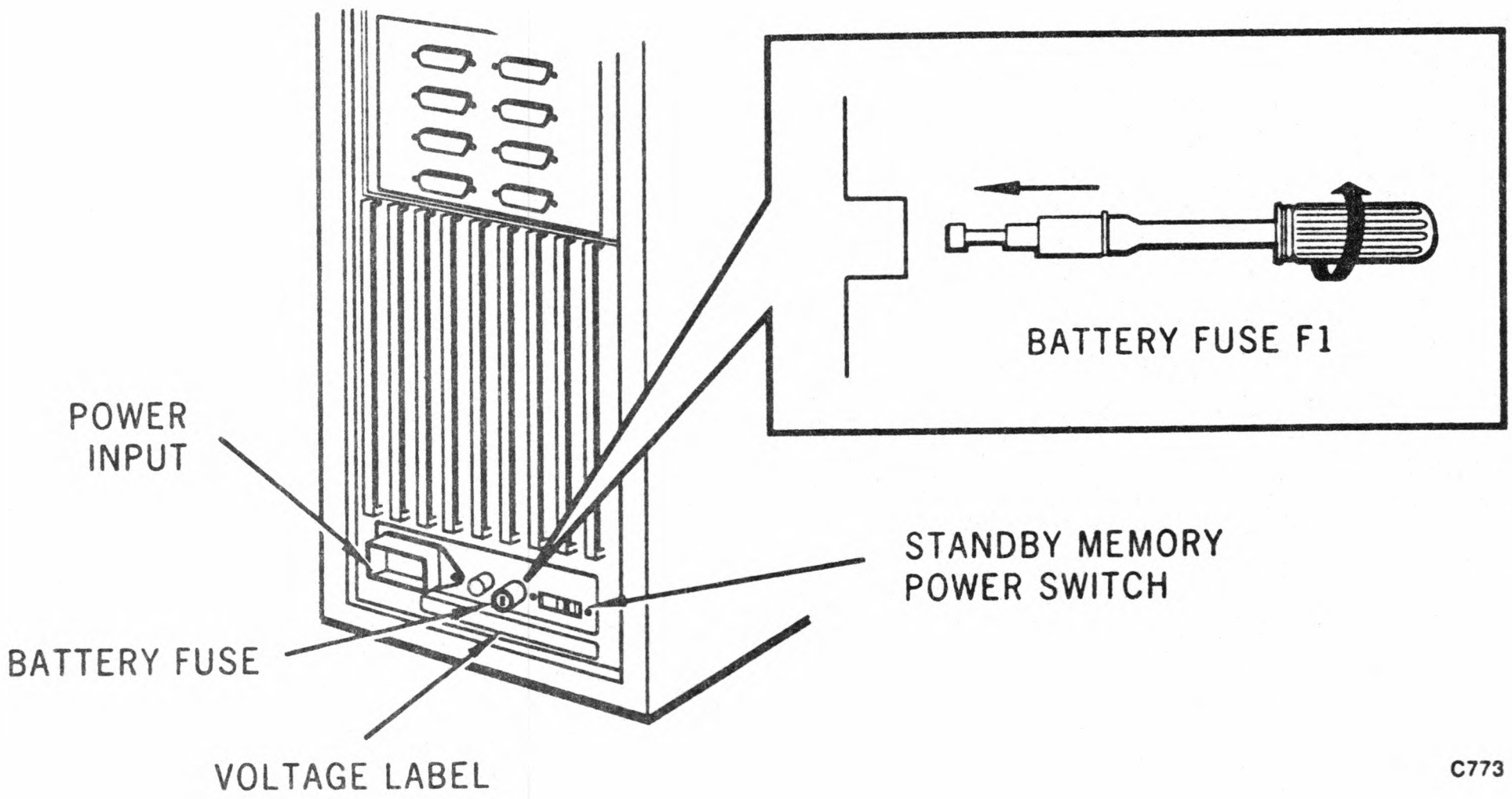

Figure 4-5. U 5000/50 Battery Back-Up Fuse

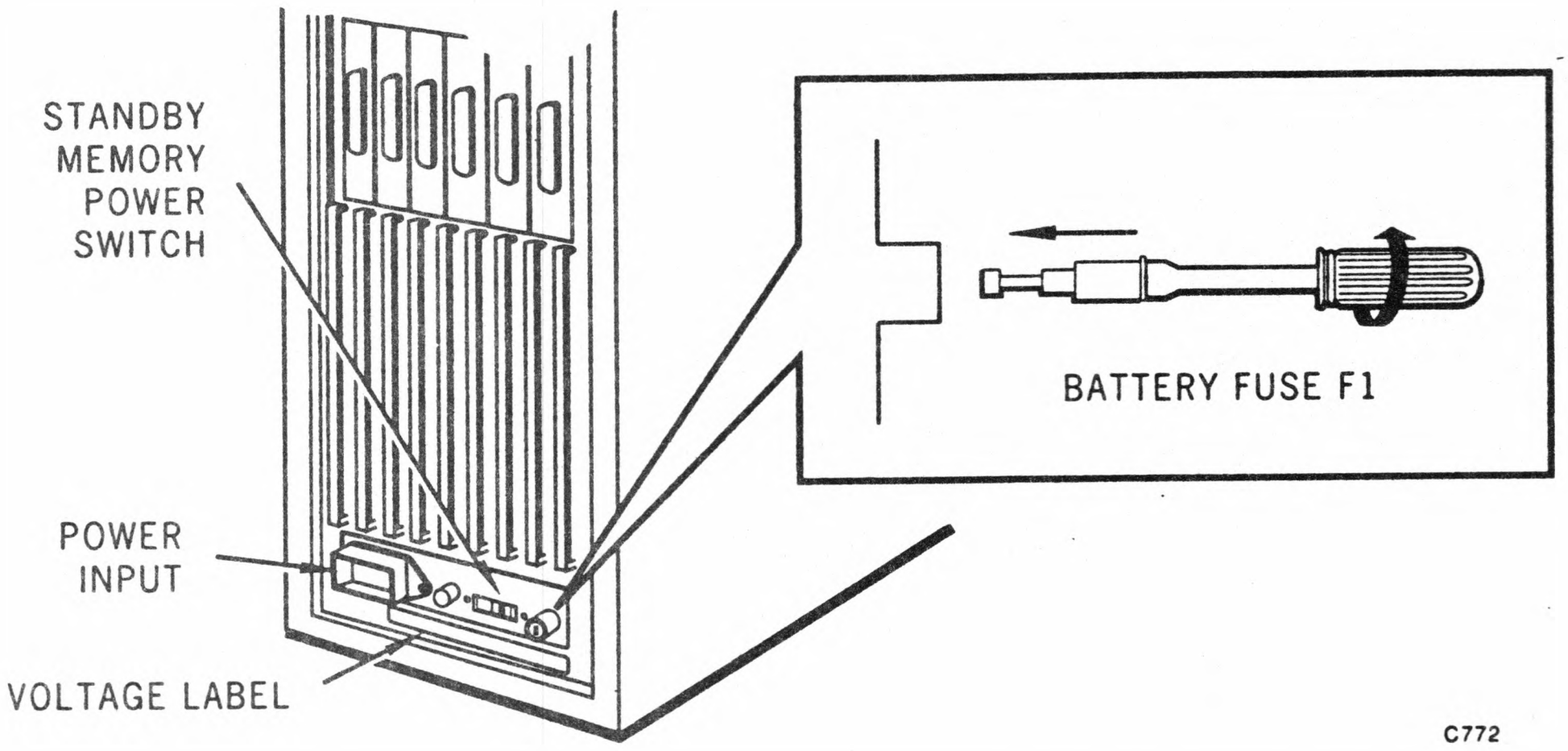

Figure 4-6. U 5000/55 Battery Back-Up Fuse

8. Attach the AC power cord to the unit, plug it into a power outlet, and proceed to the "Power Up and Power Down" section. Install the software following the procedures in the Software Installation Guide.

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Power Up and Power Down

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Section 5
Power Up and Power Down

Introduction

The power-up routine is performed by the firmware in the boot ROM. This section describes how to power on the system and what you should expect to see when performing this operation.

> **Caution**
>
> Do not attempt to power on your system until you have completed the necessary procedures of this manual. All safety, power, and environmental requirements should be met before you power on the system.

Before Power-Up

Before turning on the power for the first time, there are two final procedures you must perform. These procedures, though simple and easily taken care of, should not be taken lightly.

Voltage Selection

The system is shipped with a voltage selection switch preset for the appropriate voltage operation. A voltage label is attached to the bottom of the power supply as illustrated in Figures 5-1 to 5-3. This label states the voltage level at which your system is set to operate. If this does not match the power requirements for your area, call your Unisys Customer Service Representative before continuing.

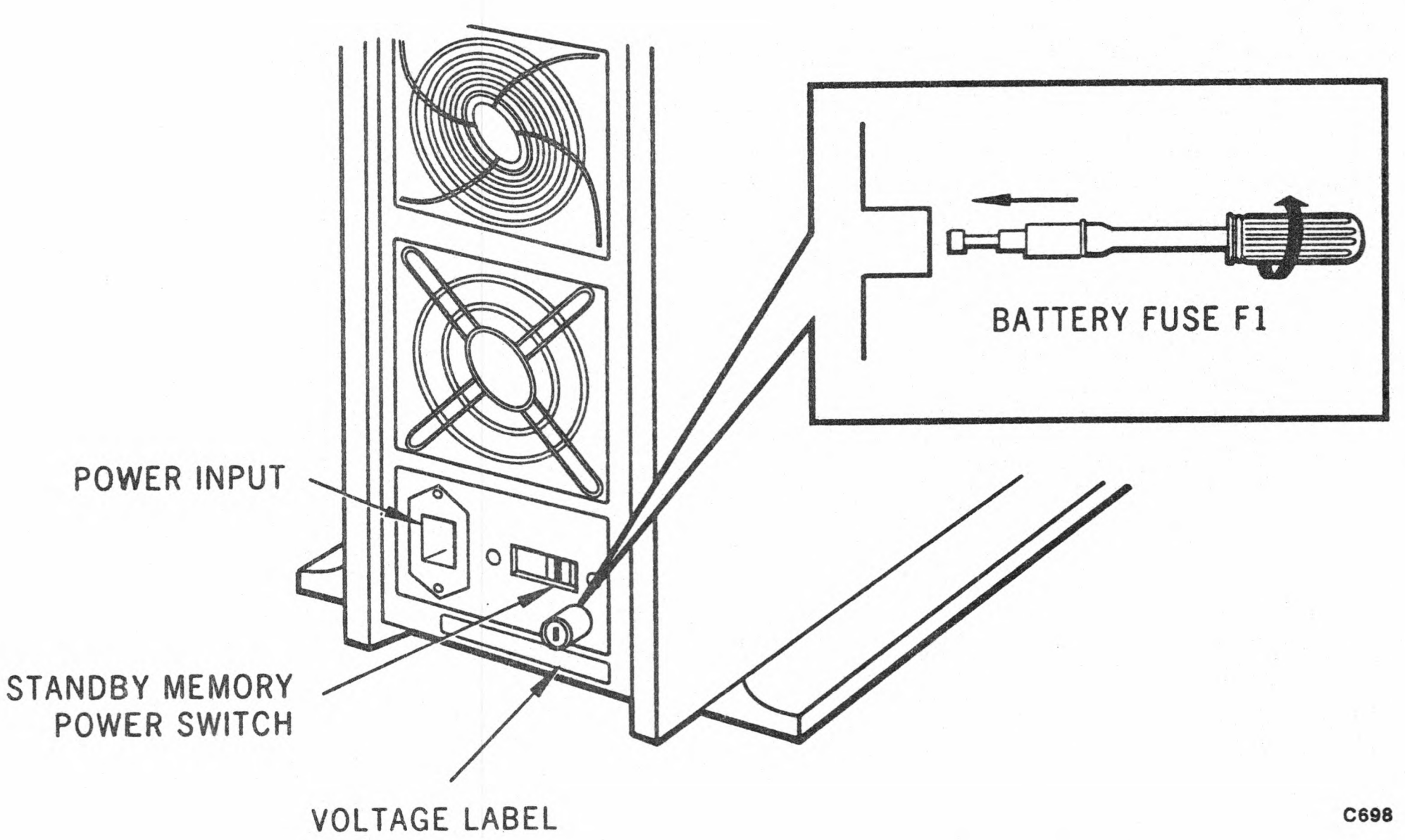

Figure 5-1. U 5000/30/55 Voltage Label Locations

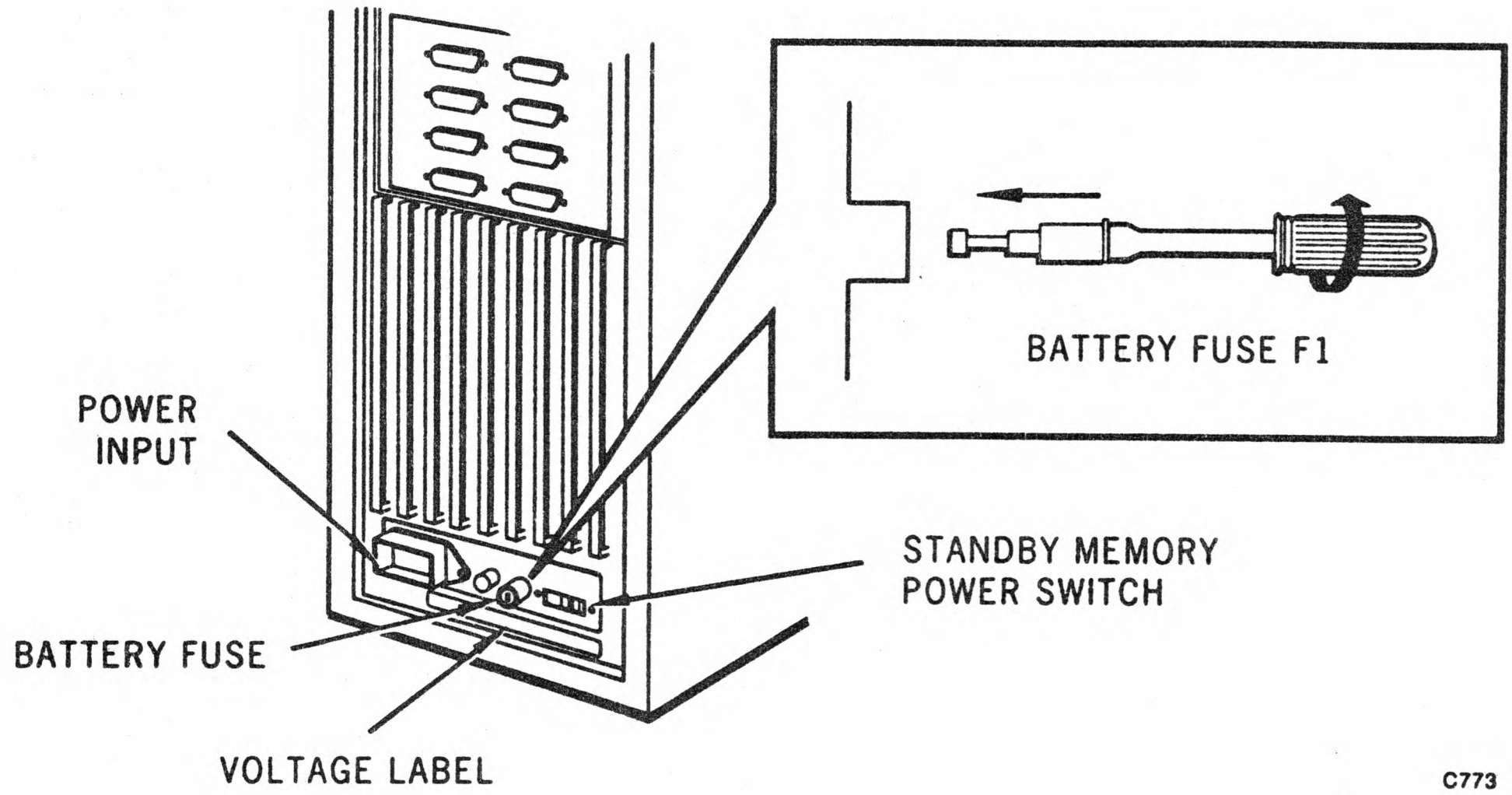

Figure 5-2. U 5000/50 Voltage Label Locations

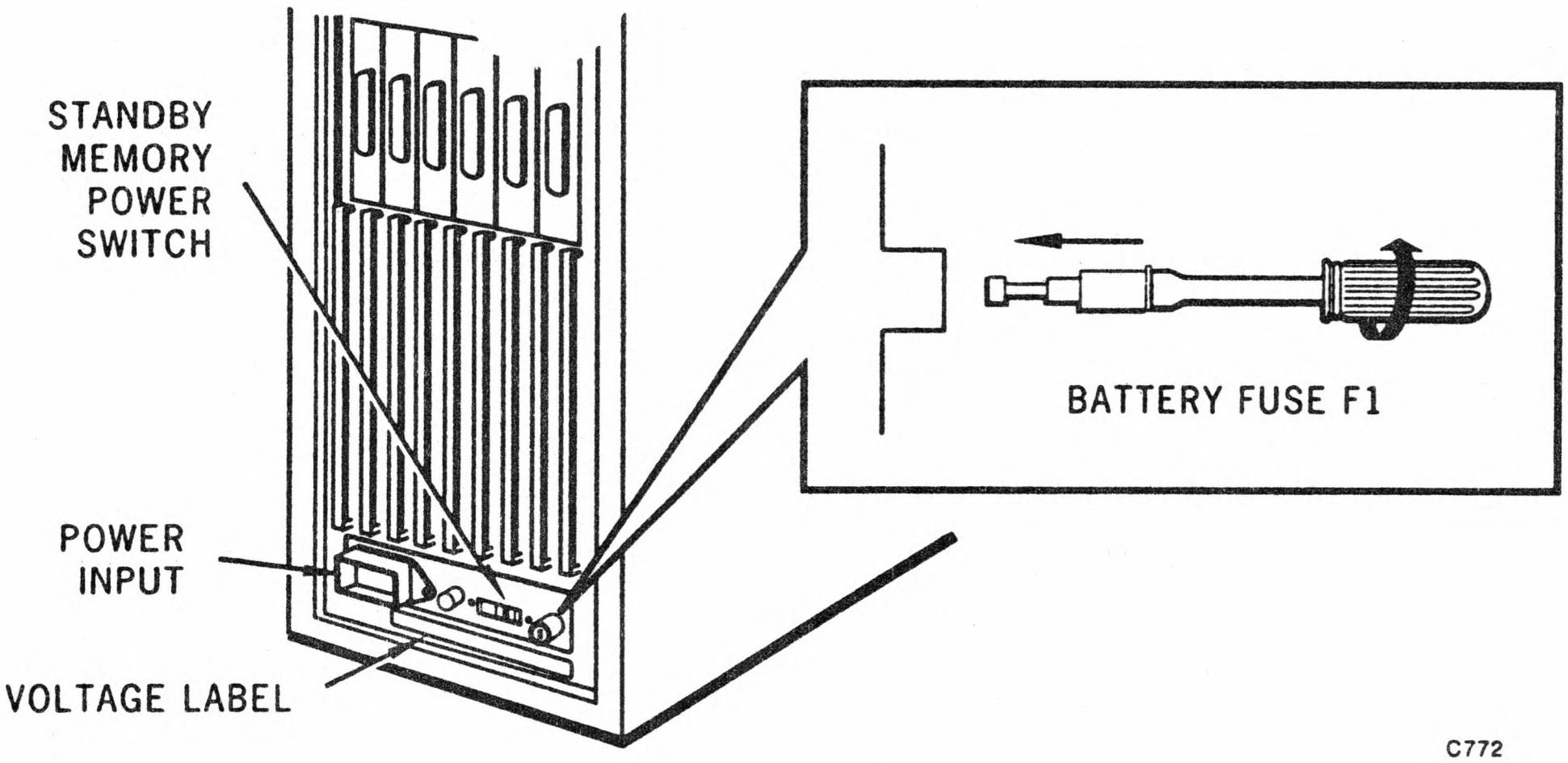

Figure 5-3. U 5000/55 Voltage Label Locations

Connecting the Power Cord

To connect the power cord to the U 5000 system:

- Plug the female end of the power cord into the power input receptacle located on the back of the system. Refer to Figures 5-1 to 5-3 for the appropriate system.

- Be sure the power switch on the front control panel is in the OFF position.

- Plug the male end of the power cord into the power source.

Powering Up the System

Before you apply power to the unit, be sure that you have installed the system as described in the previous sections. Check the voltage label for the appropriate voltage for your environment, and attached the power cord as discussed in the previous subsection.

Turning On the Power

Manual Power On

To turn on the power:

1. Turn on the terminal that is connected to Port B (control console). If a terminal is connected to Port 0, make sure that it is turned off.

2. Turn on any external SCSI devices.

3. Remove the top cover of the main unit by lifting it up.

4. Move the MANUAL/AUTO LOAD toggle switch to the MANUAL position. Refer to Figure 5-4.

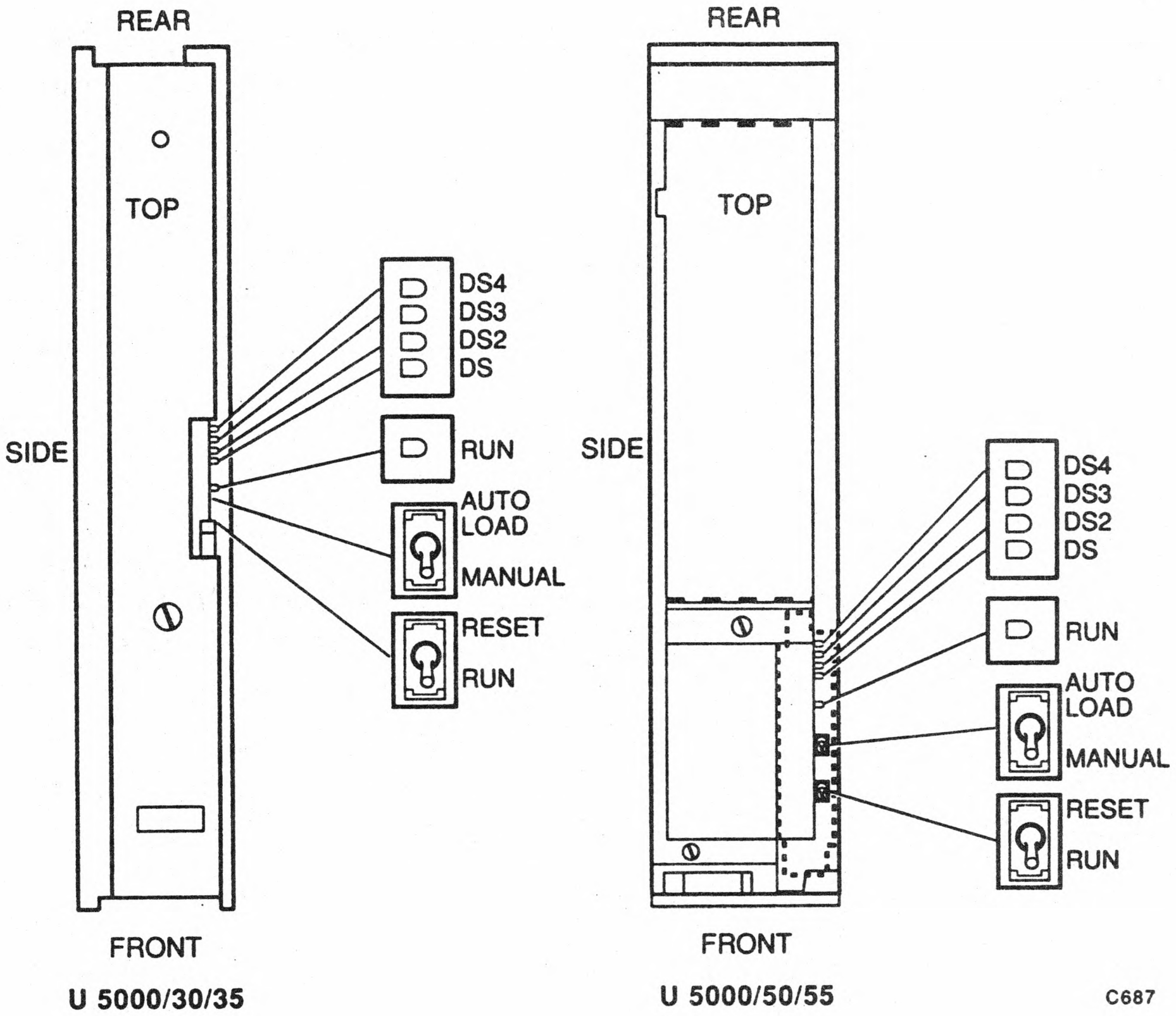

Figure 5-4. Main Unit Indicators

5. Open the upper front panel access door for the U 5000 system.

6. Turn the power switch to the On position. Refer to Figures 5-5 and 5-6 for the appropriate system.

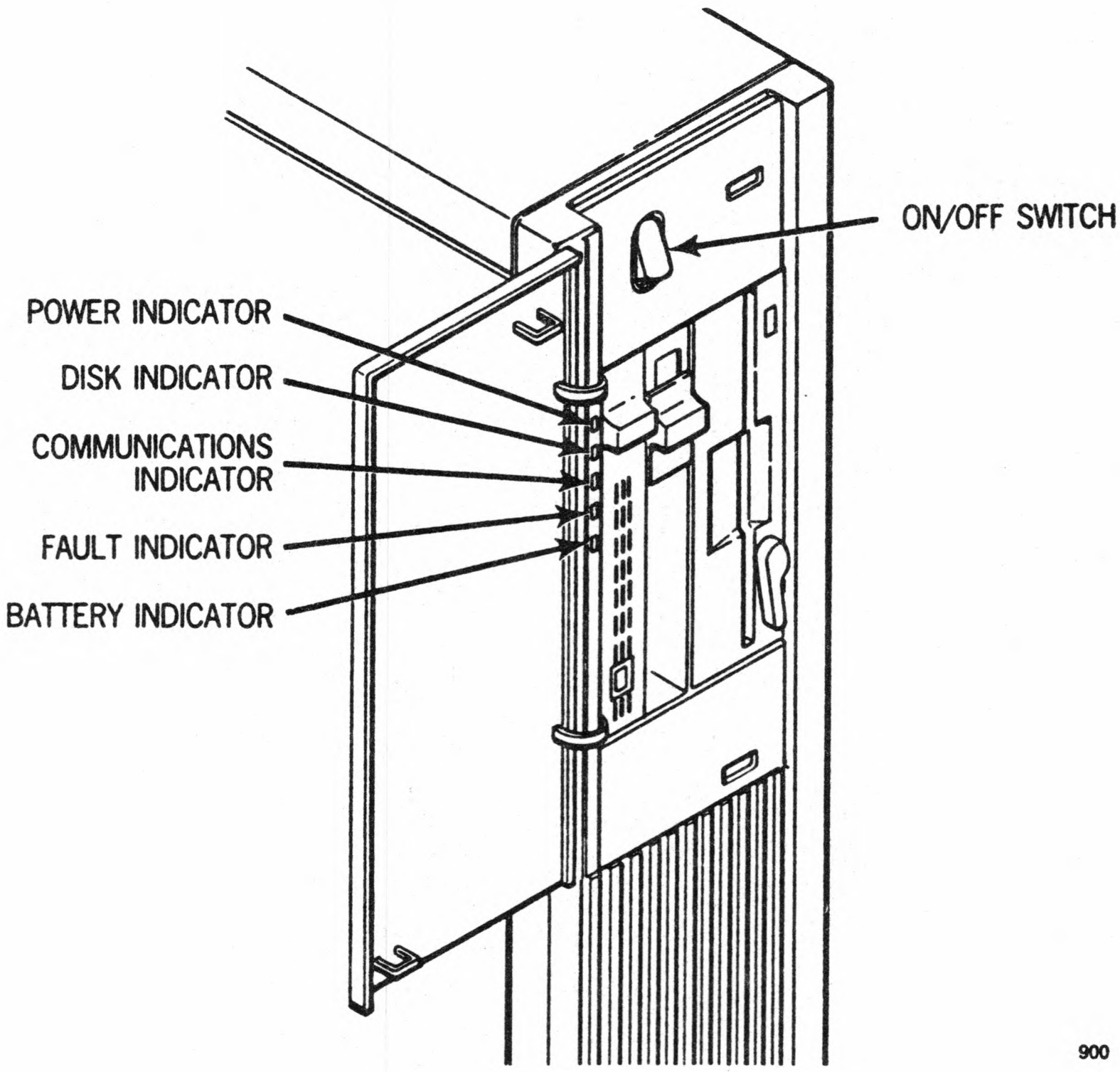

Figure 5-5. U 5000/30/35 System Power Switch and Indicator Panel

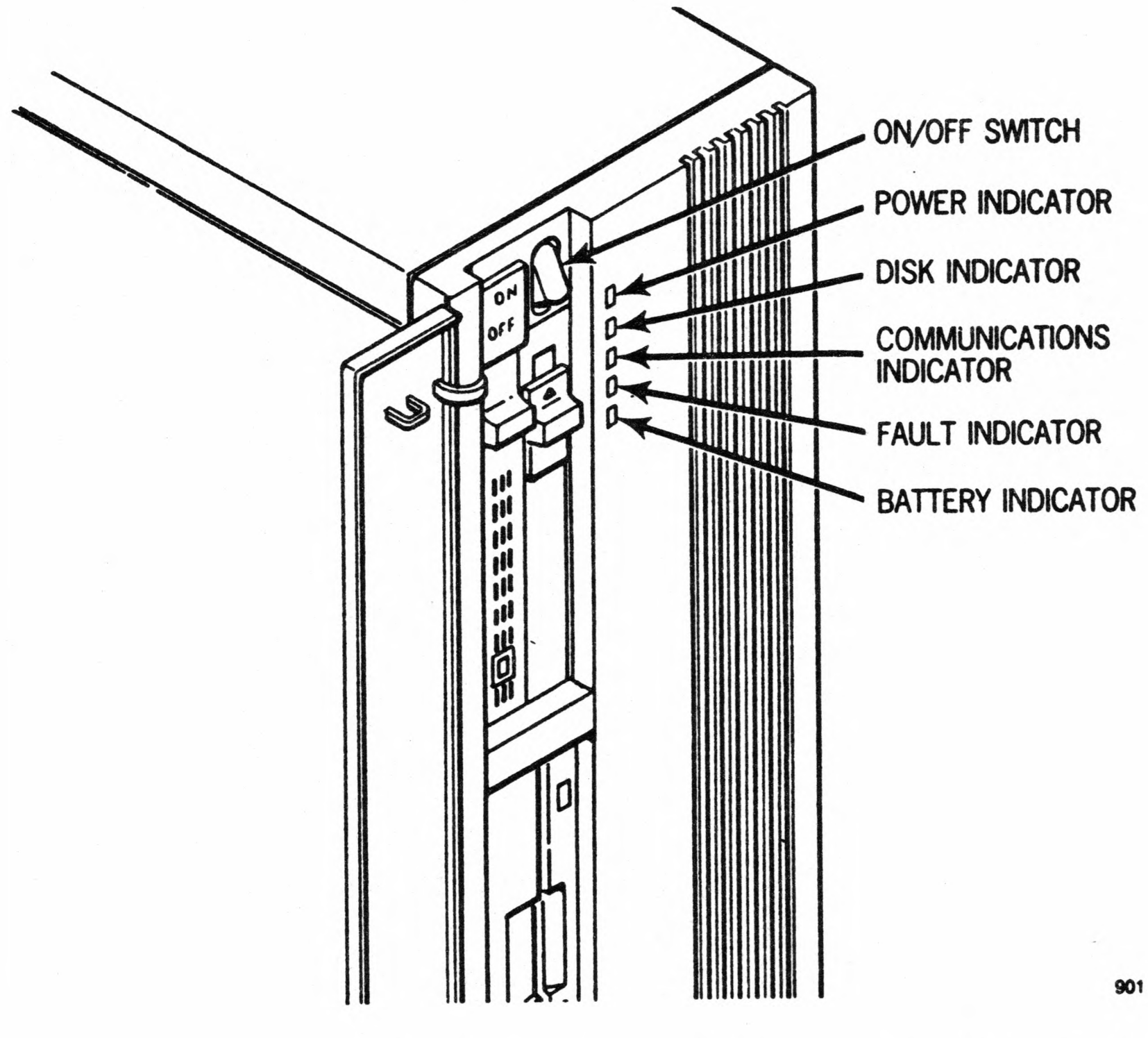

Figure 5-6. U 5000/50/55 System Power Switch and Indicator Panel

7. Verify the ventilation fan is operating and the green power indicator light is on. For illustrations of the indicator panels refer to Figures 5-5 and 5-6 for the appropriate system.

   While the system is powering on:

   - The green power light should be on.

   - If a fatal error is encountered before a sign-on message can be displayed the Fault light comes on. Refer to Figures 5-5 and 5-6 for the appropriate system. Turn the system off.

When the power switch is turned on, the terminal connected to Channel B displays the **SELECT STARTUP FUNCTION** menu as follows:

```
SELECT STARTUP FUNCTION

    1.   QUERY

    2.   INSTALL SYSTEM

    3.   LOAD

    4.   SWITCH INPUT

    5.   TEST

    6.   SUSBUG

ENTER ITEM NUMBER
```

If any message other than the **SELECT STARTUP FUNCTION** menu is displayed, refer to the "Start-Up Diagnostics" section in the Diagnostics Guide. When the **SELECT STARTUP FUNCTION** menu is displayed, continue the system software installation following the procedures in the Software Installation Guide. If any error message is displayed during the system software installation procedure, refer to the Error Message Manual.

Auto Load Power On

To turn on the power:

1. Turn on the terminal that is connected to Port B (control console). If a terminal is connected to Port 0, make sure that it is turned off.

2. Turn on any external SCSI devices.

3. Remove the top cover of the main unit by lifting it up.

4. Move the MANUAL/AUTO LOAD toggle switch to the AUTO LOAD position. Refer to Figure 5-4.

5. Open the upper front panel access door for the U 5000 system.

6. Turn the power switch to the On position. Refer to Figures 5-5 and 5-6 for the appropriate system. When the power is turned on, the U 5000 system begins its loading routine. This routine includes a power-on self-test (POST) routine when the system is in auto load mode. This loading takes approximately 2-3 minutes.

7. Verify the ventilation fan is operating and the green power indicator light is on. For illustrations of the indicator panels refer to Figures 5-5 and 5-6 for the appropriate system.

While the system is powering on:

- The green power light should be on.

- If a fatal error is encountered before a sign-on message can be displayed the Fault light comes on. Refer to Figures 5-5 and 5-6 for the appropriate system. Turn the system off.

8. After the POST routine several processes begin. Various informational messages scroll across the screen as the operating system is loading and booting up. If the system is in auto boot, no operator intervention is required.

   Note: *Your screen display may vary slightly depending upon your system configuration.*

Continue the system software installation following the procedures in the Software Installation guide. If any error message is displayed during the system software installation procedure, refer to the Error Message Manual.

What to Expect (Auto Load Only)

When the power is turned on, the system begins its ROM-based program loading routine, including a power-on self-test (POST) routine.

During the power-on routine and confidence test, certain indications can be observed. Figures 5-5 and 5-6 illustrate the indicator panels for the appropriate system.

While the system is powering on:

- The green Power LED symbol should be illuminated. Refer to Figures 5-5 to 5-6 for the appropriate system.
- When the system finishes booting, the green Status LED begins to flash.
- If a fatal error is encountered before a sign-on message can be displayed on the attached monitor or terminal, the speaker beeps and the Fault LED flashes, and then stays on.

If the POST routines detect no errors, you hear a single beep and the system is ready to boot an operating system or the floppy-based diagnostics. If any errors are detected during the self test, then you are prompted to press the space bar to retry the boot process. See the Error Message Manual for more information and instructions for correcting POST errors.

Your next step is to initialize your system and properly configure the disk storage media. For system initialization and disk drive configuration information, refer to the Software Installation Guide.

Power Down

1. Before you power down the system, make sure that no other users are on the system.

2. Run the shutdown program (refer to the Software Installation Guide).

3. Open the upper front panel access door.

4. Turn the On/Off system power switch to the Off position. Refer to Figures 5-5 and 5-6 for the appropriate system.

5. Turn off the terminal which serves as your console.

6. Turn off any externally connected SCSI devices and peripherals.

Section 6
Inserting a Streaming Tape

Removing a Streaming Tape 6-5

Section 6
Inserting a Streaming Tape

Before inserting a streaming tape, decide whether you want it to be write-protected or write-enabled. The safe indicator is in the upper left corner of the transparent side of the tape. When the arrow of the safe indicator is turned to the word SAFE, the tape is write-protected. To write-enable the tape, use a flat-bladed screwdriver and turn the safe indicator 180 degrees, so the arrow of the safe indicator faces directly away from the word SAFE. Refer to Figure 6-1.

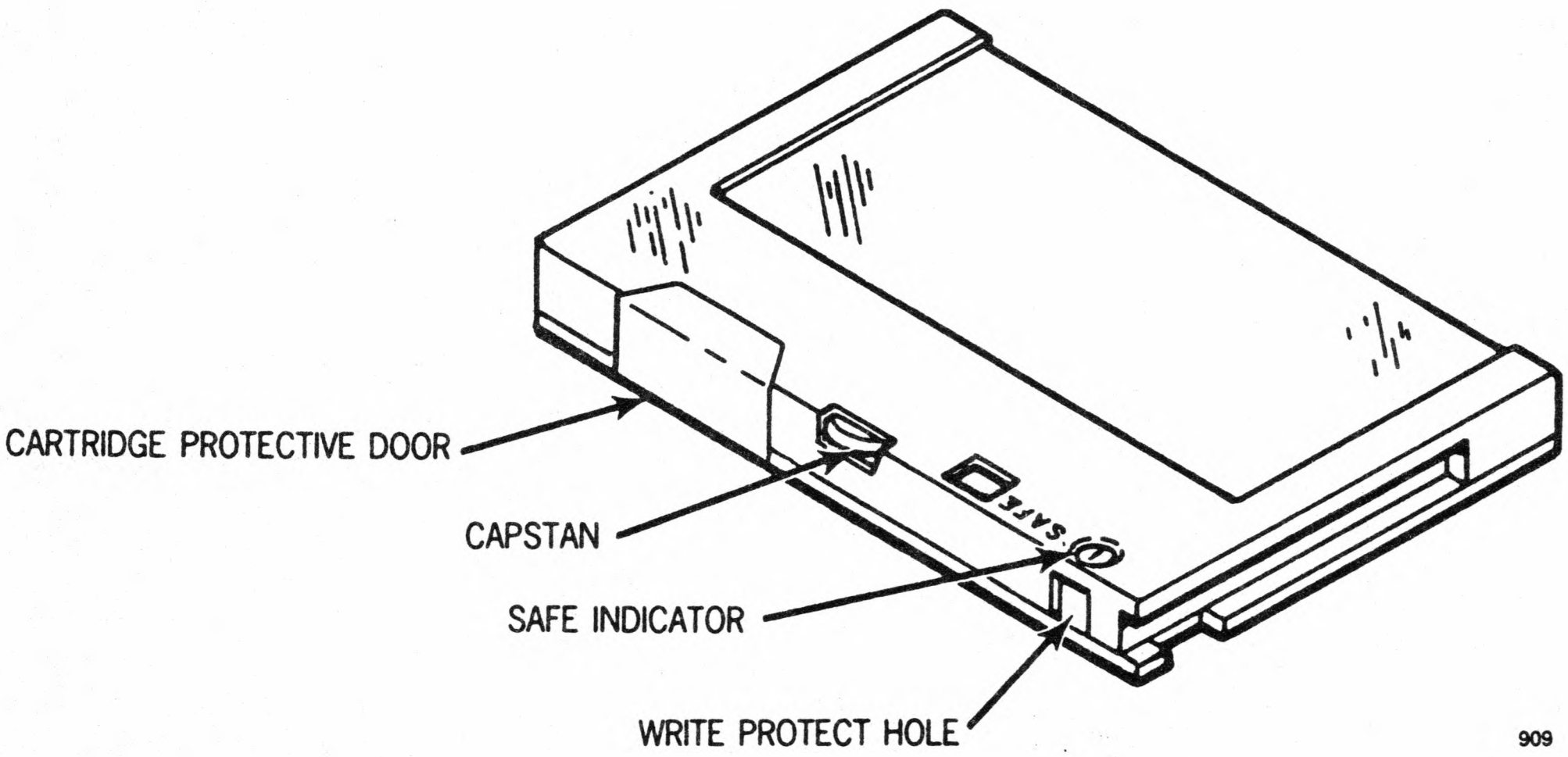

Figure 6-1. Streaming Tape

On all systems, the tape drive is located behind the small door in the upper left hand corner at the front of the system cabinet. At the upper edge of the drive opening is a loading lever that moves up or down to unlock or lock the tape cartridge. Use the following procedure to install a cartridge in the drive:

1. Move the loading lever to the up position to unblock the drive unit slot. Refer to Figures 6-2 and 6-3 for the appropriate system.

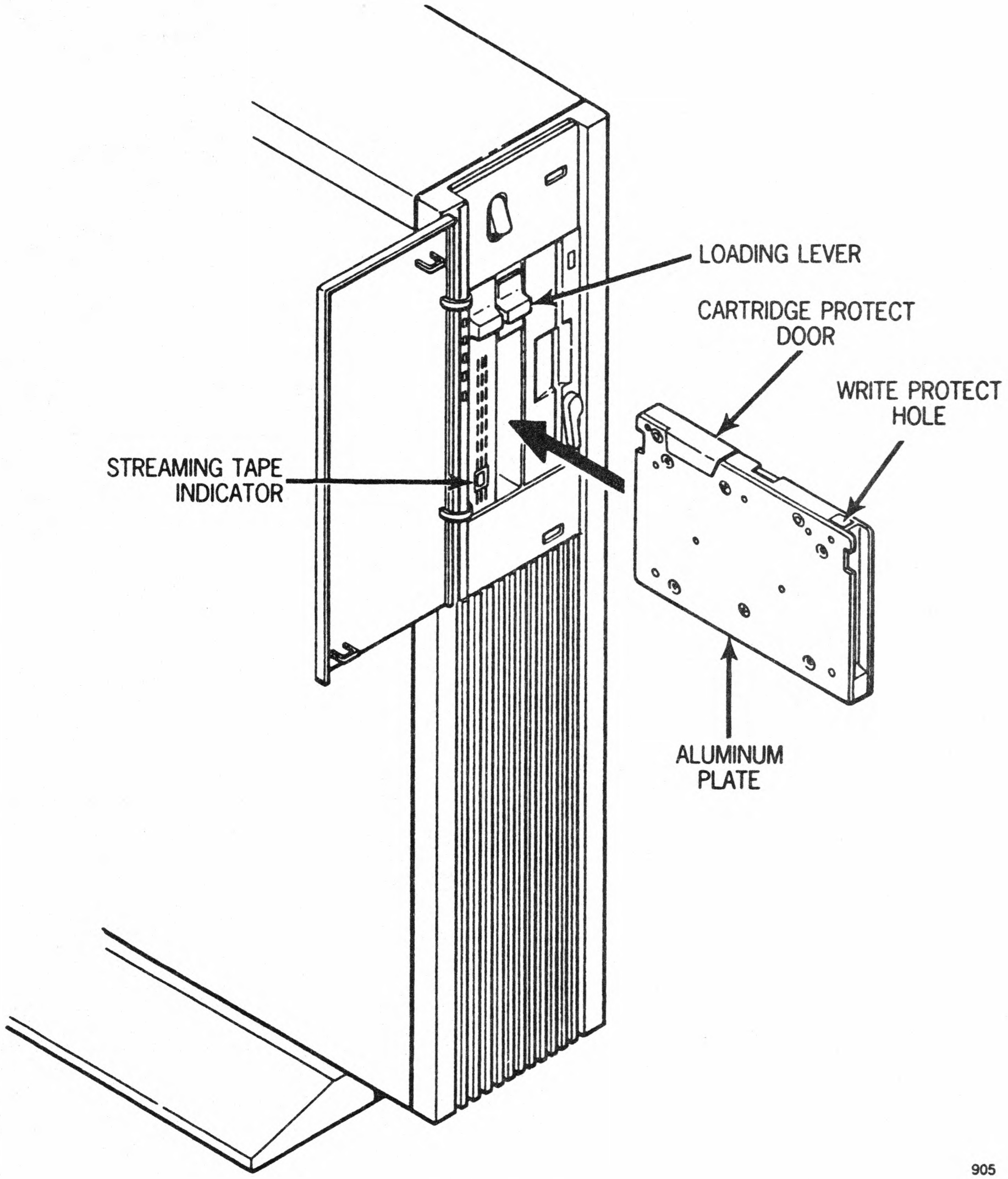

Figure 6-2. Inserting a Tape Cartridge In a U 5000/30/35

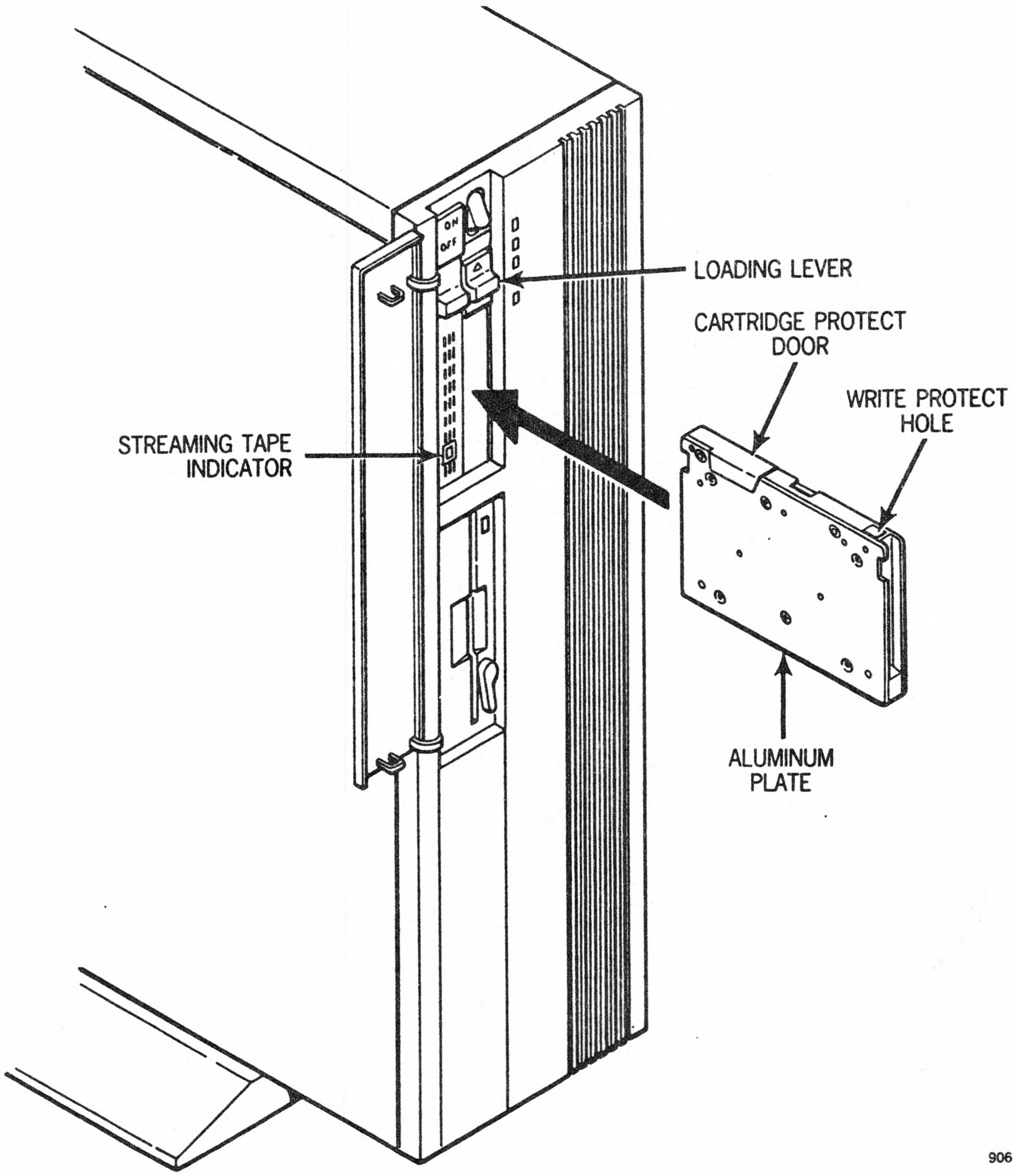

Figure 6-3. Inserting a Tape Cartridge in a U 5000/50/55

2. Remove the tape cartridge from its container and close the container.

3. With the label edge down and the aluminum plate to your left, slide the cartridge into the drive until it stops.

4. Move the loading lever down to lock the cartridge in position. Make sure the loading lever clicks into position.

Removing a Streaming Tape

To remove the tape cartridge, be sure that the drive light is off. Move the loading lever up; the drive partially ejects the cartridge. Pull the cartridge out and put it in the container.

Glossary

A

AC

See alternating current.

alternating current (AC)

The type of electric current commonly provided through wall receptacles, in which the current reverses direction at regular intervals; as opposed to direct current provided, for example, by a battery.

ANSI

American National Standards Institute; referring to a particular standard established by this institute.

asynchronous

Relating to data transferred at irregular and unpredictable time intervals.

B

backup

A copy of information on a system which is preserved on a separate medium.

baud (rate)

Transmission speed (100 baud = 10 characters per second).

boot

To start the computer's operating system or to load the operating system into memory.

boot ROM
The ROM integrated circuit that stores the program which tests and initializes the hardware and then searches for a device (floppy disk, tape, disk, in that order) that contains the operating system code.

C

cathode ray tube (CRT)
The high voltage vacuum tube with florescent screen that make up the terminal display unit.

central processing unit (CPU)
The part of the computer which interprets and executes instructions.

configuration
The arrangement of system hardware by nature, number, and characteristics of its functional units.

console
The terminal that an operating system communicates with when it boots.

control console
The console used to install and maintain a computer system.

CPU
See central processing unit.

CRT
See cathode ray tube.

D

device
A physical input/output unit.

disk
A hard platter coated with magnetic material, consisting of several round plates analogous to phonograph records, on which large amounts of data can be stored and quickly accessed.

diskette
A magnetic storage medium that is smaller and more flexible than a hard disk.

drive
The hardware device that holds magnetic disks or tapes while they are in use.

E

error
The hardware (or software) condition that prevents the successful execution of a computer process.

error message
The message reported by the computer system of any error condition that exists.

Ethernet
A networked communication package.

F

floppy disk
Another name for a diskette.

formatting
The process of imposing an addressing scheme on a disk or diskette so that data can be stored on it.

H

hardware
The physical machinery of a computer and any associated devices.

I

input/output
The path by which information enters (input) or leaves (output) the computer system; a keyboard is a computer *input* device, while a terminal screen is an *output* device.

internal component
Any element of a device located under or behind a panel, cover, or shield.

L

LED
See light emitting diode.

light emitting diode (LED)
A semiconductor diode which converts applied voltage to light and is used in digital displays and panels.

load
To install software onto computer system hardware.

M

menu
A list of choices presented on the terminal from which you make a selection.

N

network
The hardware (and software) constituting the interconnections between computer systems, permitting electronic communication between the systems and associated peripherals.

O

operating system
The program for managing the resources of the computer.

P

parallel connection
A type of connection that transmits data from a computer to a printer in groups of bits.

parallel printer
A printer connected to a computer by a parallel connection.

parity
A method of checking for communication errors, that data received matches data sent.

PC
Personal computer.

peripheral
An auxiliary device under control of the main computer used mostly for input, output, or storage functions (e.g., terminals, printers, or disk drives).

port
The connection point on a computer for a device such as a terminal or printer.

POST
See power-on self-test.

power down
Removal of power (AC or DC) from the system.

power-on self-test (POST)
A routine of hardware confidence testing the computer goes through when the power is turned on.

power up
The applying of power (AC or DC) to the system.

printer
A machine that prints out or hardcopies information transferred from a computer.

program
The set of instructions given to a computer on how to do a specific task.

R

read-only memory (ROM)
A kind of memory which data can be read from but which cannot be altered by the user accessing the memory.

ROM
See read-only memory.

S

SCSI
See small computer serial interface.

serial
Having to do with data bits received in sequential fashion, not transferred simultaneously.

serial connection
A type of connection that transmits data from a computer to a printer one bit at a time.

serial port
A place on the computer system to connect a single terminal, a serial printer, or a modem.

serial printer
A printer connected to a computer by a serial connection.

small computer systems interface (SCSI)
A standard bus interface for mass storage and peripheral devices.

software
Instructions and programs that tell the computer what to do.

streaming tape
The tape cartridge inserted into the main computer tape drive, typically containing the operating system.

synchronous
Referring to data transferred at predefined intervals that can be anticipated by the transmitting or receiving equipment.

T

terminal
An input/output device connected to a computer system, usually consisting of a keyboard and a video display, or a printer.

tty
Derived from the abbreviation for teletypewriter, generally used to denote a user terminal; the whole area of access between a computer and its peripheral devices.

U

upgrade
The modification of a hardware configuration to improve system performance.

W

write-enabled
Referring to a storage medium which may be written to, which is not protected against the writing of data.

write-protected
Referring to a storage medium protected against use by unauthorized users, physically locking out the writing of additional data.

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